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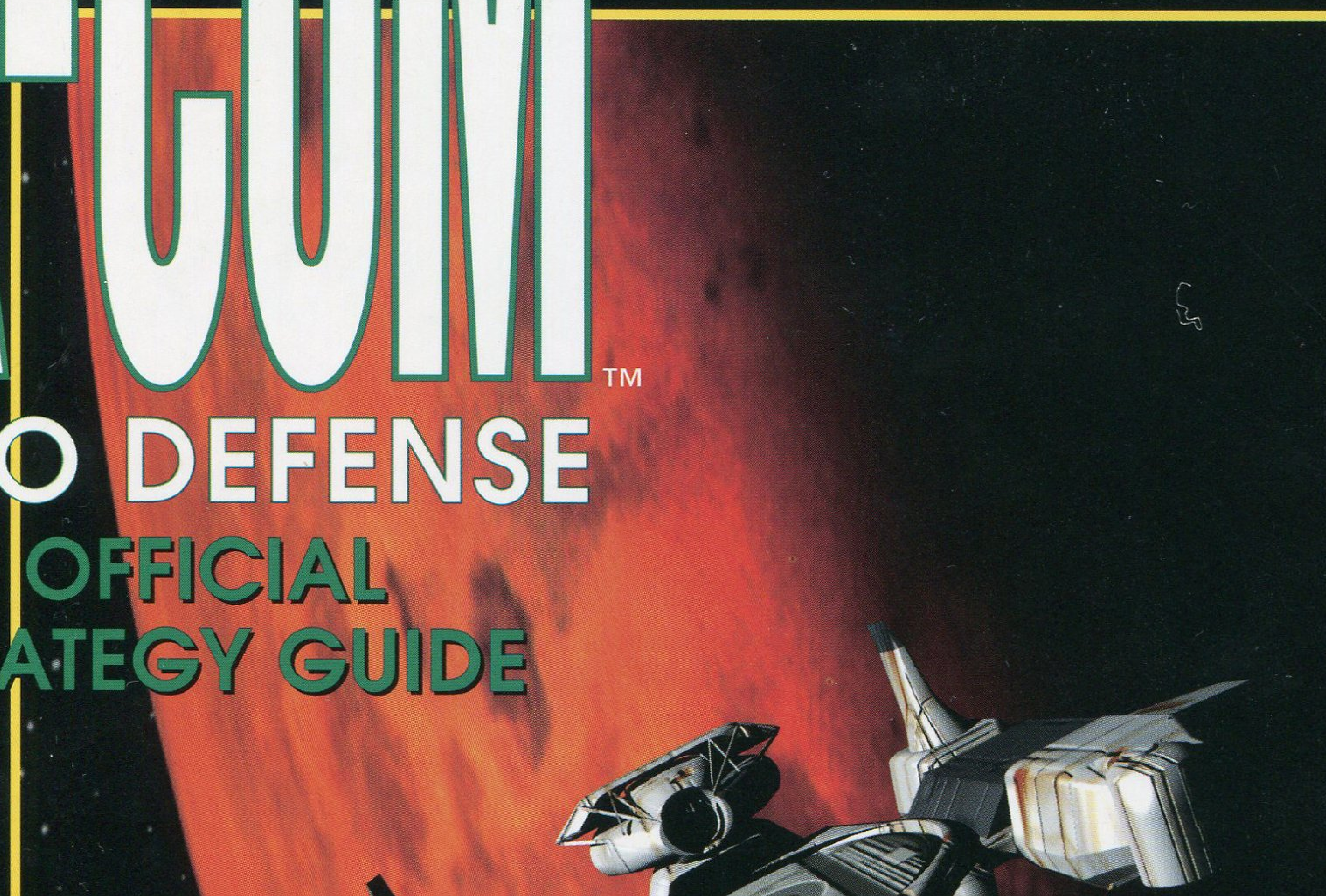
X-COM™
UFO DEFENSE
THE OFFICIAL STRATEGY GUIDE



David Ellis

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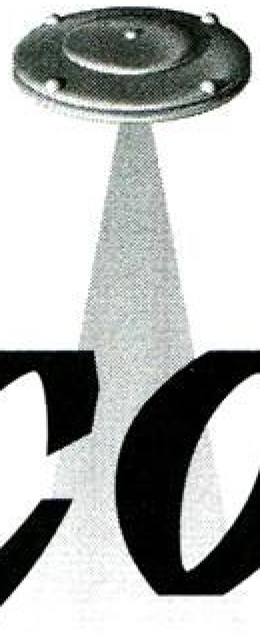

X-COM
UFO DEFENSE:

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The Official Strategy Guide

David Ellis

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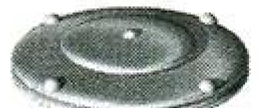


Acknowledgements

A lot of time and effort goes into the compilation and writing of a book like this; a lot more, in fact, than I had first imagined. Hours and hours of generating charts and tables. Playing and replaying scenarios and redoing moves to make sure that all the charts and tables are correct and trying to find the most effective and useful strategies through hours of trial and error. And, most difficult of all, trying not to get caught up in playing the game for fun when I should have been working on this book.

When I first casually glanced at X-COM UFO Defense (then still known by its British name, UFO Enemy Unknown) being tested in the MicroProse quality assurance department, I must admit I wasn't too impressed. It looked like just another commonplace strategy game, with nothing in particular to distinguish it from any other game in the genre. It wasn't until I was approached with the proposition of writing this book that I actually sat down and started to play the game. That was when I discovered just what a wonderful, addictive game this really was.

Armed with my newfound enthusiasm, I set out to learn everything I could about playing the game. And after a month or so of playing the game, I sat down and began to write. And that was when I discovered just what a huge task this book was going to be.

Sometimes it felt like it would never end; but it did.

And I think it was worth the effort.

I want to acknowledge the help of a number of people who have made this project possible in the first place and others who spent a lot of their own time to make my job a little easier.

First, thanks to Frank Brown in MicroProse quality assurance. He put me on to the fact that this game was in desperate need of a strategy guide, and he suggested that I write it—even though I had never played the game at that time. Without Frank, I might never have played the game at all.

Also, many thanks to the now departed (no, not *dead,* just gone) Lawrence Russell, who believed in my abilities and pushed the idea of this strategy guide through all the red tape that my last strategy guide never made it through. You left before it was done, Larry, but I finished it (finally). Thanks.

Generating the huge number of statistics, charts, tables, and maps would not have been possible (or certainly not as easy and accurate) without the help of Tim Roberts and Peter Woods at MicroProse, U.K., who put me in touch with one of the super-creative minds behind this great game: Julian Gollop.

Julian certainly provided me with more information than I could have hoped for, certainly cutting my research time by a significant amount. He patiently endured dozens of overseas phone calls and answered every question I had about the game, no matter how insignificant. Thanks a lot for all your time and patience, Julian. I can't wait for the sequel. Thanks also to Nick Gollop, Julian's brother, who was always there in the background to answer the questions Julian didn't have the answers to.

Also, thanks to the MicroProse U.S. customer service and quality assurance personnel, who provided me with several huge compilations of hints and strategies for the game. They would make fine X-COM operatives, should the need for such a group arise in our world. Special thanks to Chris Bowling, Andy Mazurek, Jim Hendry, and Vaughn Thomas, who took the time to print the lists for me. They were a huge help.

Finally, thanks to Meghan, my wife, who spent lots of her free time this summer patiently waiting for me to finish writing so that we could finally get out and enjoy the sunshine. I also suspect that she is going through Civilization withdrawal, since I have been hogging all the computer time here lately. She has the patience of a saint and proved it by allowing me to live long enough to finish this book. Thanks, Meghan. You can have the computer (and your husband) back now.

— David Ellis, August, 1994

Foreword

From the log entries of Michael C. "Chrispy" Bowling, Captain, X-COM forces U.S.

". . . As the Skyranger settled in a cloud of dust on the outskirts of Los Angeles and I breathed in a whopping double-lungful of early-morning smog, I figured the day was about as bad as it was gonna get.

"Boy, was I wrong.

"You're always tense when you touch down in a terror site, but it tends to put everybody on edge when things start going bad from the get-go. The ramp opened, and the hovertank started to nose its way carefully out of the compartment and—WHAM! WHAM! WHAM! Three direct hits from a heavy plasma cannon, and the tank is a smoking heap of rubble on the access ramp.

"Never one to let my people face danger I wouldn't face myself, I vaulted over the wreckage and off the ramp, turning toward the source of the shots. The predawn shadows were hiding from sight whatever was doing the shooting. Behind me one of the squad leaped out behind me and tossed an electroflare in the direction of the shots. It hit the ground, sending the jet-black shadows fleeing for the eaves of the building across the street.

"'There it is,' whispered my companion. It was Albinak, the new rookie. A little loud and a little overeager, but a good man.

"I looked at the spot between the buildings where Albinak was pointing and there it was.

"Sectoids. I hate these guys.

"Before I had a chance to take aim, Albinak pumped off three quick blasts from his laser rifle. The shots disintegrated the corner of the building to the Sectoid's right but missed the alien entirely. Aiming more carefully, I squeezed off a shot from my plasma rifle and caught the scumbag right between his oversized alien eyes. He went down with a satisfying squeal of agony.

"Then all hell broke loose.

"From behind me, I heard a fast, scuttling noise and turned just in time to see a Chryssalid turn one of my squad into a bloated zombie. Albinak and I opened fire, destroying both the zombie and the alien. Sergeant Lamarr blasted the Chryssalid that hatched out of the dead zombie before it could cause any trouble. Then he tossed out another electroflare so we could see in the other direction.

"We should have left the lights out. There were two more Sectoids on the opposite side of the street, one lurking in the second floor window of a warehouse, the other in a topiary maze in a small park. I could see that one of them was a leader, and before I could shout a warning, I saw Lamarr's eyes glaze over as the Sectoid leader used a psi-amp on him. Lamarr was under alien control. Behind him, I could see two others in the Skyranger dropping their weapons and frantically searching for a way out. Luckily, Clark kept his wits about him and zapped Lamarr with a stun-rod in time to prevent him from blasting any of his own people.

"I turned back toward the park and saw that there was, in addition to the Sectoid leader, a Reaper. He was busy devouring a helpless civilian, and I knew we were next. Dropping my plasma rifle, I ran into the ship and grabbed a blaster launcher. I loaded it, and grabbing two extra rounds of ammo, I leaped back into the fray outside. Carefully plotting a trajectory, I fired toward the park.

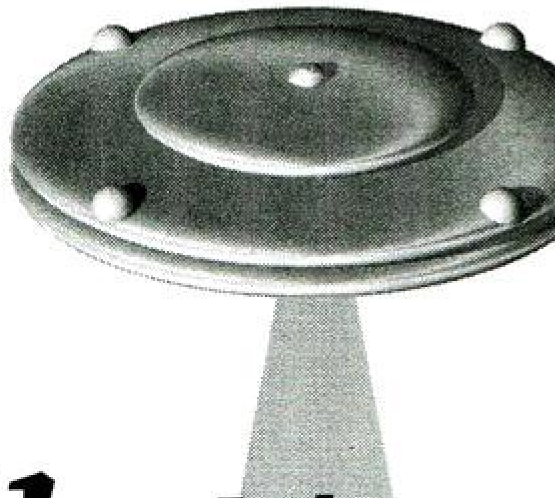
"The charge zipped up and over the Skyranger and around a lamp post, finally slamming home on the ground, right at the feet of the Reaper. The huge blast fanned out, engulfing the Reaper and the Sectoid leader and blowing away enough of the warehouse next door to send the other Sectoid plummeting two stories to land in a blackened heap in the smoldering remains of the park.

"In my excitement at the small victory, I had forgotten about the Mutons behind me. Where there was one, there were always more. Luckily, Albinak remembered. Priming a grenade, he tossed it into the gas station across the street. The grenade landed next to one of the pumps. When it went off, the pumps exploded one by one, lighting the nighttime landscape with blossoms of orange fire. The third pump that went up took out two Muton terrorists who had, unwisely, been hiding behind it.

"As the smoke cleared, we could tell by the motion scanner that the only movement was that of the civilians, who were just now coming out to see the aftermath of the aliens' failed terror raid. Their town was a little worse for the wear, but they were nonetheless grateful to us for stopping the aliens. It could have been a lot worse.

"I examined our losses. One man dead, another with one hell of a headache. And a pile of slag that had once been a half-million-dollar tank. I had seen better. But I had seen a lot worse . . . and I knew I would see even bigger losses in the future. Probably in the near future.

"In X-COM, it's all in a day's work. . . ."



Chapter One

X-COM: AN OVERVIEW

It's 1999, and the century is about to turn . . . for the worse!

Welcome to the world of *X-COM UFO Defense.* Since you have purchased this strategy guide, it should be safe to assume that you already have the game and that you have discovered that under its straightforward, easy-to-grasp exterior is a first-class strategy game with a great number of complex strategies and issues. And, as with all good strategy games, planning and careful attention to what may seem to be small issues can turn out to be the factor that causes you to quickly conquer the aliens' home base at Cydonia on Mars or to struggle along for hours, only to have your troops end up as the subjects of alien experiments.

This strategy guide serves two functions. First, it presents the raw data of the game, in the form of charts, tables, maps, and illustrations. You can use this data to create more effective strategies by basing your method of play on cold, hard facts rather than on a "best guess." Second, for those who need a bigger push in the right direction (don't be shy or ashamed: I usually fall into this category myself!), an entire chapter at the end of this book is dedicated to specific hints and strategies used by the finest

X-COM commanders on the planet: the MicroProse customer service and quality assurance staff as well as the designers and programmers themselves. Hints of this sort can also be found interspersed throughout this book.

WALK-THROUGHS AND TUTORIALS

Because every game is different in X-COM UFO Defense, it is impossible to provide a precise walk-through of the game. Appearances of UFOs, terror sites, and alien bases are random, as are the number and type of alien beings who occupy them. Alien strength and accuracy also vary from game to game, according to the difficulty level chosen. Any attempt at a specific walk-through would only lead, therefore, to inevitable frustration.

What should hopefully be compensation for the lack of a specific walk-through is the inclusion maps of every type of UFO and examples of typical structures found in alien bases, including the final base on Mars. Even if this doesn't guide you through the game from beginning to end, it should reduce the chances of being surprised by the geography in most battle situations.

In the game manual on pages 10 through 52, a comprehensive game tutorial provides you with basic information about the operation of all game screens and controls. For a first-time player, this tutorial is a valuable way to ease into the game with the least number of unpleasant surprises. I recommend that you at least glance over the tutorial, if you haven't done so already, to get an idea of how the basics of the game work. Most of the subjects in the tutorial are covered in more depth in this book.

MANUAL INSTRUCTIONS VERSUS STRATEGY GUIDE INSTRUCTIONS

A glance through the subject headings in the early chapters of this strategy guide may lead you to believe that it repeats information already found in the manual. Well, it does . . . and it doesn't. Because of the turnaround time for printing, game manuals are usually sent to the printer well in advance of the final version of the game. The material in the manual is based, therefore, on an unfinished, or "beta," version of the game. This inevitably leads to occasional omissions of last-minute features from the manual and incorrect commands in the documentation due to last-minute programming changes.

X-COM is no exception. No need to blame MicroProse, or Mythos Games, or *anybody,* for that matter! It's just the way it is! In writing this book, I've gone over the final release version of the game and rewritten some of the instructions based on the new information. When there are discrepancies between the instructions presented in the manual and the instructions presented here, go with this strategy guide—it was written last.

GAME VERSIONS

At the time this strategy guide was written, MicroProse had released two versions of this game. The first version was released by MicroProse U.K. and was distributed in Europe under the name UFO: Enemy Unknown. This first release was for European distribution only, but it is likely that some consumers in the U.S. market bought copies through any of a number of distributors who deal in overseas releases. It is easy to tell whether this is the version you have: In addition to the different title, this version asks you to choose which language you want to use at the beginning of the game.

The second version, manufactured for release in the United States, is entitled X-COM: UFO Defense. The U.S. version was released several months after the European version and, in addition to the title change, it omits the foreign-language selections. The U.S. version also contains a number of bug fixes. This version was released on both floppy disk and CD-ROM. Both formats contain the same game version.

If you find that you have the European release of the game, it is recommended that you obtain the latest version from MicroProse. To do so, simply contact the MicroProse customer-service department. The phone number for customer service is on the last page of your technical supplement. You are required to send in your original game disks in order to receive the new version. At the time of this writing, no patch was available for downloading. New game versions are regularly posted on the MicroProse BBS, however, and on other on-line services such as America Online, CompuServe, and GEnie. It may be worth a quick call to check for a new version. It is the quickest and easiest way to upgrade for those who have a modem available.

All the information presented in this strategy guide is based on the U.S. release, X-COM: UFO Defense, as well as on notes and technical information from the game-design team. It should apply just as well, however, to the European release of the game.

THE LAYOUT OF THIS BOOK

In laying out this strategy guide, I have attempted to cover all the many diverse topics in the game in an order that makes the most logical sense. It is important to realize that most of the topics presented here are intertwined with one another and that they do not easily separate into cut-and-dried single topics. Therefore, you may find references to other topics interspersed throughout each chapter.

The order I have chosen begins with the game basics and the construction of bases and proceeds through X-COM equipment and all the statistical and monetary concerns of the X-COM operation. Next, I cover the research and development, which is crucial to your success. I proceed from there to cover X-COM squads and battle tactics and descriptions of all the aliens in the game. Finally, the tactics used in each type of ground assault, including the final battle on Mars, are covered.

Many of you may choose to skip ahead to the final chapters to get quick information about aliens and to look at all the maps and charts. That's fine for short-term solutions. But I strongly recommend that you do not skip the early chapters. Although you spend most of your game time doing battle with the aliens, what you do in that critical time between UFO recoveries and terror missions is essential to winning the game. Good battle tactics and intimate knowledge of the enemy are worthless to you if poor resource management has left you so low on money that you can't afford to buy ammunition for your weapons or if a lack of research has left you hopelessly behind in technology.

REFERENCES USED IN THIS BOOK

To understand much of the material presented in the following chapters, you have to be familiar with only the following computer-related reference (which you are most likely already familiar with anyway):

> *Click* refers to pressing and releasing a button on the mouse to initiate a game action. Unless otherwise specified, all instructions to "click" something refer to moving the cursor arrow to the option or object described and then pressing and releasing the left mouse button.

SPELLING

I should probably say a word or two about the spelling choices I have made while writing this strategy guide.

Because X-COM was designed and written in England, the spellings used within the game and the manual are British spellings. Examples include "defences," "UFOpaedia," "centre," and "utilised."

Throughout this strategy guide, I have taken some artistic license and chosen to "translate" the spellings to those normally used in the United States ("defenses," "UFOpedia," "center," and "utilized"). This translation is not meant to insult or confuse anyone; it is done to keep the spelling consistent throughout this book.

MASTERING CYDONIA

The biggest expectation most people have when they pick up a strategy guide for a computer game is that they can just skim through the book and instantly be able to beat the game on the most difficult level. There's no way any strategy guide can make a promise to that effect.

What I can promise is that this book provides you with all the information you need to become a smarter X-COM player. It gives you everything you need to make the best decisions possible in almost any game situation. It drastically decreases your chances of being unpleasantly surprised during combat and teaches you effective ways to defend yourself on the off chance that you are surprised.

But will you instantly win the game as a result of reading this book? You might, but probably not. No matter how good you are, there is always the chance that you can lose squad members to random shots from a lucky alien sniper. There is a chance that even your squad's best marksman might miss an easy shot at a critical time.

The random factors of the game, in addition to the strategies involved, make X-COM fun and challenging. Don't get frustrated and give up. Study the hints and strategies in this book, and use them to gain the upper hand. There are no cheats for winning the game instantly in this book; that would take all the fun out of it!

So read on. With this information (and a little luck), you will eventually make the Earth safe again for mankind.

THE GAME: OBJECT AND SCORING

Although the strategies involved in X-COM are many and varied, the goal of the game is straightforward. Your job is to keep the Earth as safe as possible from alien forces, until you are able to research the origin of the alien threat and have the technology to launch a mission to the main alien stronghold for one final showdown. The object of the game is to destroy the final base, thus ending the alien threat.

SCORING

As in most games, your performance in X-COM is measured by using a scoring system. Success and failure are determined by comparing the performance of your X-COM troops with the performance of the aliens.

If you are new to the game, some of this information may be a mystery to you. If this is the case, skip this chapter and read on. After you've gotten into the basic game elements, you will understand the way scoring works.

Those of you who have been playing awhile probably have some idea of how the scoring system in the game works, at least as far as how you are scored for successes and failures in Ground Assault missions. But that only scratches the surface of the scoring system in X-COM. You receive or lose points for just about every action performed in the game. This chapter details exactly how many points you receive or lose through your actions.

X-COM Scoring

The score received by X-COM forces in the game is determined by their performance in the following areas:

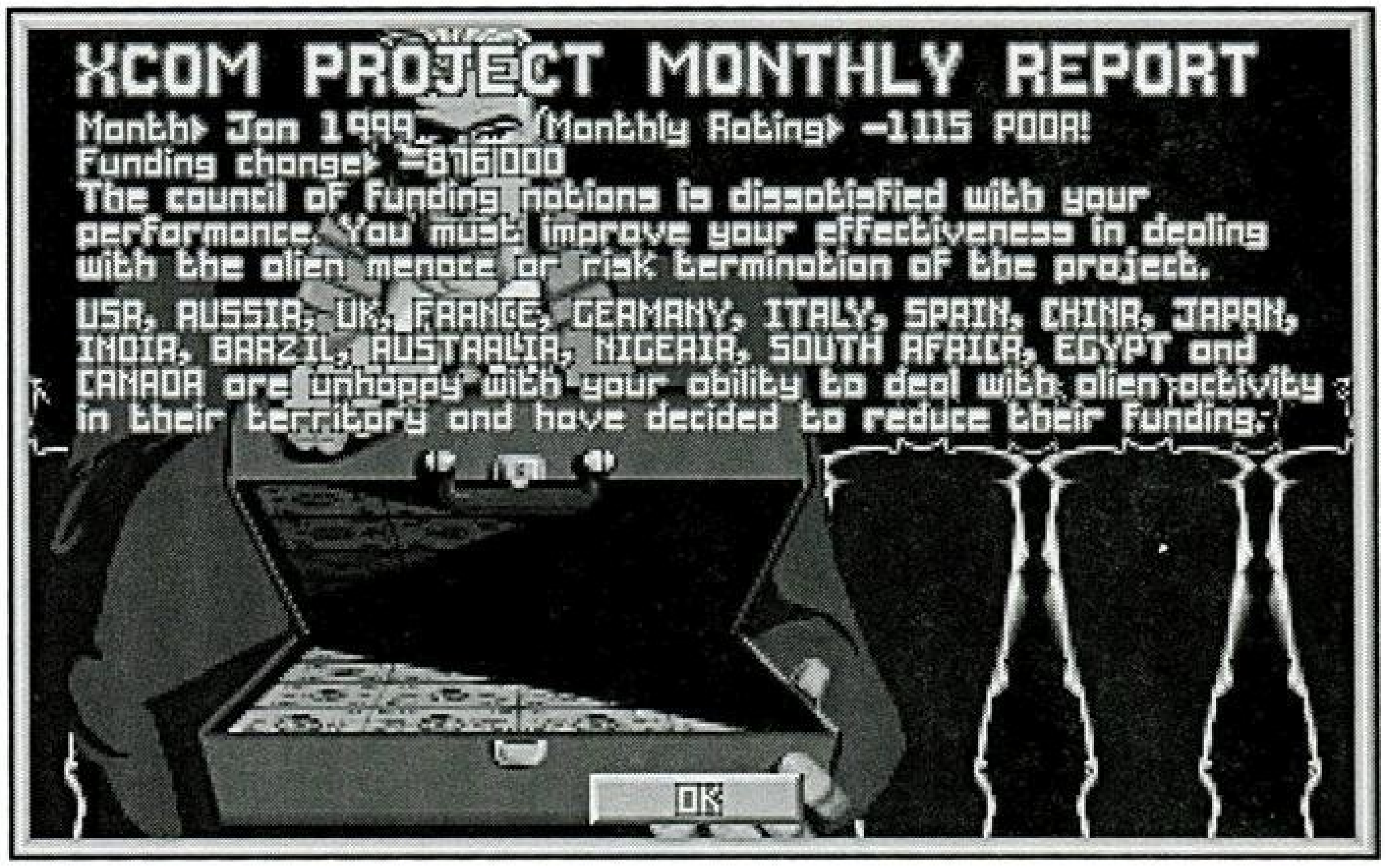
- Interception or destruction of UFOs
- Ground Assault missions
- Research work

Successful performance in these areas leads to a high score and vice versa. Your score in the game is extremely important because it is a large factor in determining the amount of funding X-COM receives from contributing nations. A high score leads to funding increases from happy nations who can easily see that X-COM is doing a good job at what it is being paid to do. A low score leads to decreased funds because contributing nations are unhappy with your overall lack of effectiveness and progress. Points are tallied at the end of each game-month and presented in the X-COM Project Monthly Report, as shown in Figure 1-1.

Points received from each task performed by X-COM are added to determine XCom's score at the end of each month. The next few sections show a breakdown of how points are scored in each area.

Scoring for Interception and Destruction of UFOs

UFOs detected by your bases must be intercepted to keep alien activity under control. The best course of action is to force UFOs to crash-land rather than destroy them in the air. You get points either



XCOM PROJECT MONTHLY REPORT

Month> Jan 1999 Monthly Rating> -1115 POOR!

Funding change> -876000

The council of funding nations is dissatisfied with your performance. You must improve your effectiveness in dealing with the alien menace or risk termination of the project.

USA, RUSSIA, UK, FRANCE, GERMANY, ITALY, SPAIN, CHINA, JAPAN, INDIA, BRAZIL, AUSTRALIA, NIGERIA, SOUTH AFRICA, EGYPT and CANADA are unhappy with your ability to deal with alien activity in their territory and have decided to reduce their funding.

Figure 1-1
The X-COM Project Monthly Report.

way, but UFOs that crash intact are much more valuable in the long run in terms of research and supplies.

Table 1-1 shows the points received for shooting down or destroying UFOs. Table 1-2 shows the number of points lost if the X-COM craft attempting to intercept the UFO is destroyed in the process.

Table 1-1 Points Scored for the Grounding or Destruction of UFOs

UFO Type	UFO Destroyed	UFO Grounded
Small Scout	100	50
Medium Scout	150	75
Large Scout	250	125
Harvester	500	250
Abductor	500	250
Terror Ship	1000	500
Battleship	1400	700
Supply Ship	800	400

Table 1-2 Points Lost for the Destruction of X-Com Craft

Craft Type	Points Lost
Skyranger	-200
Lightning	-300
Avenger	-400
Interceptor	-250
Firestorm	-250

Scoring for Ground Assault Missions

Ground assault missions take on a number of forms in the game, from the exploration of grounded UFOs to an attack on an alien base. There are a great many ways to gain and lose points in these missions.

One way to gain and lose points is through the actions you take during the course of the mission. Table 1-3 lists all points that may be gained and lost through actions (or lack of) during ground assault missions.

During ground assault missions, you encounter one or more species of alien life. To successfully complete any ground assault,

Table 1-3 Points for Ground Assault Actions

Action	Points
Each civilian killed by aliens	-30
Each civilian killed by XCom	-50
Each civilian saved	30
Each XCom soldier missing in action	-20
Each XCom soldier killed	-20
Each HWP destroyed	-20
Alien Base destroyed	500

Table 1-4 Points for killing and capturing aliens

Alien/Rank	Alien Killed	Alien Captured
Floater Soldier	12	24
Floater Navigator	14	28
Floater Medic	16	32
Floater Engineer	18	36
Floater Leader	25	50
Floater Commander	35	70
Sectoid Soldier	10	20
Sectoid Navigator	12	24
Sectoid Medic	14	28
Sectoid Engineer	16	32
Sectoid Leader	20	40
Sectoid Commander	25	50
Snakeman Soldier	15	30
Snakeman Navigator	17	34
Snakeman Engineer	20	40
Snakeman Leader	28	56
Snakeman Commander	36	72
Ethereal Soldier	20	40
Ethereal Leader	30	60
Ethereal Commander	40	80
Muton Soldier	15	30
Muton Navigator	17	34
Muton Engineer	19	38
Reaper	25	50
Chryssalid	25	50
Silacoid	20	40
Celatid	20	40
Sectopod	30	60
Cyberdisc	20	40
Zombie	18	—

you must kill or capture all aliens at the ground assault site. Table 1-4 shows the points received for killing or capturing each species and rank of alien.

Another way to score points in a ground assault is by collecting UFO parts and debris and alien equipment and corpses. When you successfully complete a mission, you automatically receive all alien items at the site. Table 1-5 lists the points received for each.

Scoring for Research Work

Because research is one of the most important aspects of the game, it is taken into account in determining game score. Successfully completing as many research projects as possible yields not only a much more effective arsenal of knowledge, weapons, and equipment, but also a great deal of points. Table 1-6 shows the points scored by successfully completing each research project.

Alien Scoring

What most players don't realize is that while X-COM is scoring points, aliens are also scoring points. Like X-COM forces, the aliens are scored on how successful they are at completing various mission objectives and goals.

Comparison of the aliens' score to X-COM's score determines how effectively X-COM is controlling the alien problem. If the aliens' score is kept low, X-COM is effectively controlling the alien threat. If the aliens are scoring constantly higher than X-COM, then your people aren't doing their jobs well enough. This leads to loss of funding from contributing countries. (Funding is covered in more detail in Chapter 5.) The scores recieved by aliens are shown in Figure 1-7.

WINNING THE GAME

Winning a game of *X-COM* is not a matter of points. To win the game, you have to gather only enough research data to find the location of the aliens' Martian base and develop a spacegoing craft. Then it is a matter of getting your soldiers inside the base, killing its occupants, and destroying the controlling Brain of the aliens. Theoretically, this can be done with no more than an "OK" performance

Table 1-5 Points received for collecting alien artifacts, equipment, and corpses

Item	Points
Heavy Plasma	5
Heavy Plasma Clip	1
Plasma Rifle	4
Plasma Rifle Clip	1
Plasma Pistol	3
Plasma Pistol Clip	1
Blaster Launcher	5
Blaster Bomb	1
Small Launcher	4
Stun Bomb	1
Alien Grenade	1
Mind Probe	1
UFO Power Source	20
UFO Navigation	5
Alien Food	2
Alien Reproduction	2
Alien Entertainment	2
Alien Surgery	2
Alien Abduction Chamber	2
Alien Alloys	1
Alien Habitat	1
Elerium-115 (per 50 units)	5
Sectoid Corpse	5
Snakeman Corpse	5
Ethereal Corpse	5
Muton Corpse	5
Floater Corpse	5
Celatid Corpse	3
Silacoid Corpse	3
Chryssalid Corpse	3
Sectopod Corpse	3
Cyberdisc Corpse	3
Reaper Corpse	3

Table 1-6 Points scored for completion of research projects

Research Project	Points
Laser Weapons	10
Motion Scanner	20
Medi-Kit	20
Psi-Amp	20
Heavy Plasma	30
Heavy Plasma Clip	7
Plasma Rifle	25
Plasma Rifle Clip	6
Plasma Pistol	20
Plasma Pistol Clip	5
Blaster Launcher	40
Blaster Bomb	10
Small Launcher	30
Stun Bomb	10
Alien Grenade	20
Elerium-115	40
Mind Probe	25
UFO Propulsion	30
UFO Navigation	30
UFO Construction	30
Alien Food	30
Alien Reproduction	30
Alien Entertainment	30
Alien Surgery	30
Alien Abduction	30
Alien Alloys	30
New Fighter Craft (Firestorm)	30
New Fighter-Transporter (Lightning)	30
Ultimate Craft (Avenger)	30
Laser Pistol	10
Laser Rifle	10

(Continued on page 14)

(Continued from page 13)

Table 1-6 Points scored for completion of research projects

Research Project	Points
Heavy Laser	10
Personal Armor	20
Power Suit	20
Flying Suit	20
Craft Laser Cannon	10
Craft Plasma Weapon	25
Craft Fusion Weapon	25
Laser Defenses	15
Plasma Defenses	25
Fusion Defenses	25
Grav Shield	25
Mind Shield	25
Psi-Lab	25
Hyper-Wave Decoder	25
Tank/Laser Cannon	15
Hovertank/Plasma	25
Hovertank/Launcher	25
Alien Autopsies (each)	50
Alien Interrogations (each)	50*
Alien Origins	60
The Martian Solution	60
Cydonia or Bust	60

*No points are received for the interrogation of aliens if no information is obtained.

Table 1-7 Alien Scoring

Alien Action	Points
Each UFO that flies over the Earth	1
Each UFO that lands	2
Alien Base is built	50
Each day an Alien Base exists on Earth (per base)	5
A Terror Site is ignored by X-COM	1000
Aliens sign a pact with a funding country	150
A harvest mission is performed successfully	30
An abduction is performed successfully	50

rating each month. However, poor performance more often leads to an early defeat.

LOSING THE GAME

A number of conditions result in losing the game:

- If you stay in debt over $1 million for two consecutive turns, the X-COM project is canceled and the game is over.
- If you have two consecutive "bad" months in terms of score, the X-COM project is canceled and the game is over. What is considered a "bad" score varies by level:

Beginner Level:	-900
Experienced Level:	-800
Veteran Level:	-700
Genius Level:	-600
Superhuman Level:	-500

- If all X-COM bases are captured by aliens (if no X-COM bases remain in the game), the game is over.
- If you fail in your attempt to destroy the final alien base on Mars, the game is over.

Chapter Two

THE GEOSCAPE SCREEN

On the Geoscape screen, the first screen you see in the game, you plan and control many functions of the game. From here, you choose the location of your bases, monitor the activity of UFOs, search for alien bases, and launch intercept, recovery, and defense missions to deal with the growing alien threat. On this screen, you also can monitor and control the passage of game time and receive status reports about many aspects of the game. The Geoscape screen and its components are shown in Figure 2-1. The screen is divided into five sections:

- **Main window:** The largest section; shows a 3-D view of Earth
- **Menu options:** The five buttons in the upper right corner of the screen, labeled Intercept, Bases, Graphs, UFOpedia, and Options
- **Game time indicator:** On the right side of the screen, just below the menu options
- **Game time controls:** Just below the time indicator
- **View controls:** In the lower right corner, below the time controls

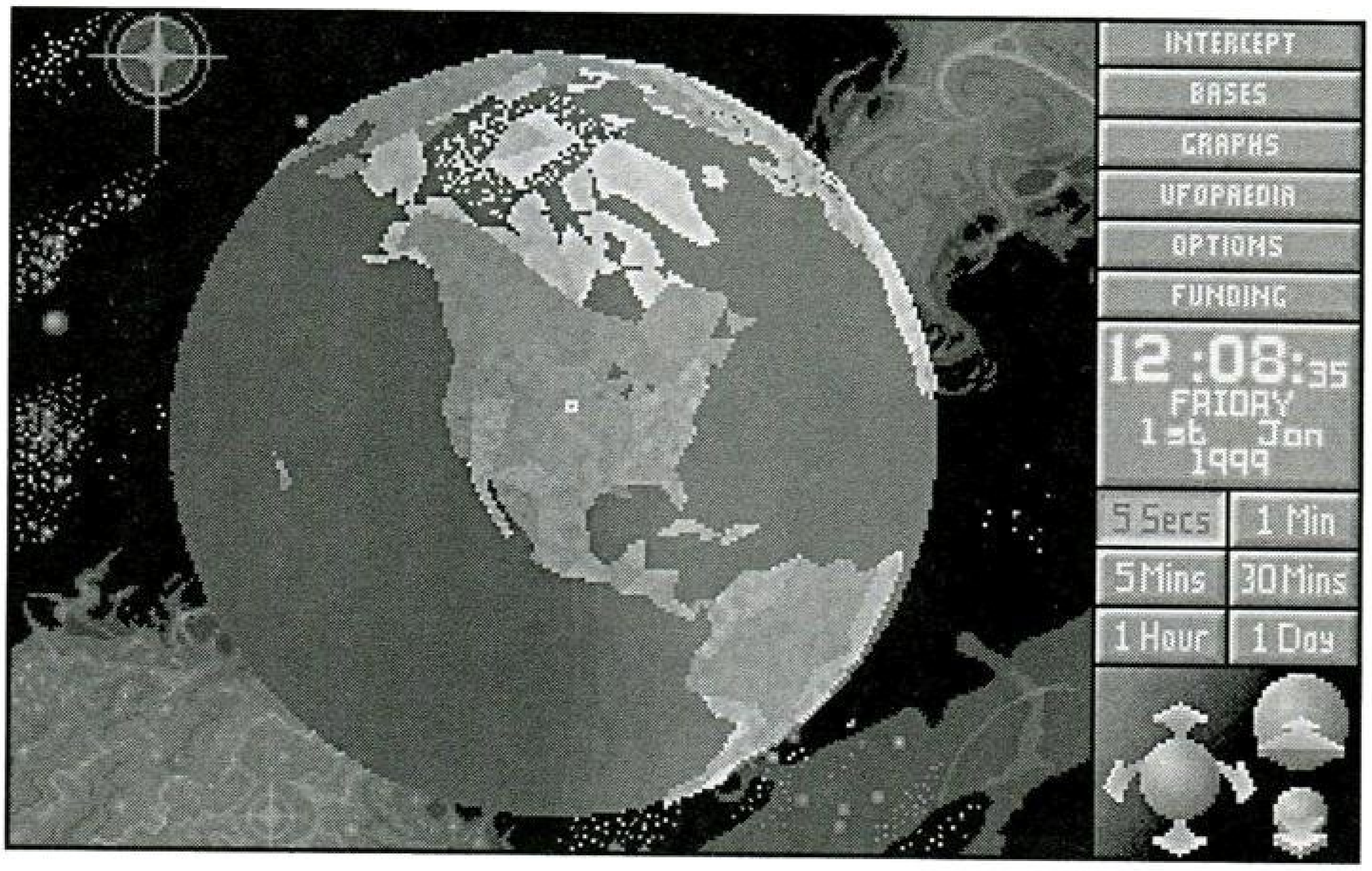

INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
12:08:35
FRIDAY
1st Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 2-1
The Geoscape screen.

THE MAIN WINDOW

The main window of the Geoscape displays a 3-D map of Earth from an orbital perspective (see Figure 2-2). From here, you can see the positions of X-COM bases, track UFO traffic, handle the interception of UFOs, locate enemy bases, and locate UFOs that have landed or been shot down.

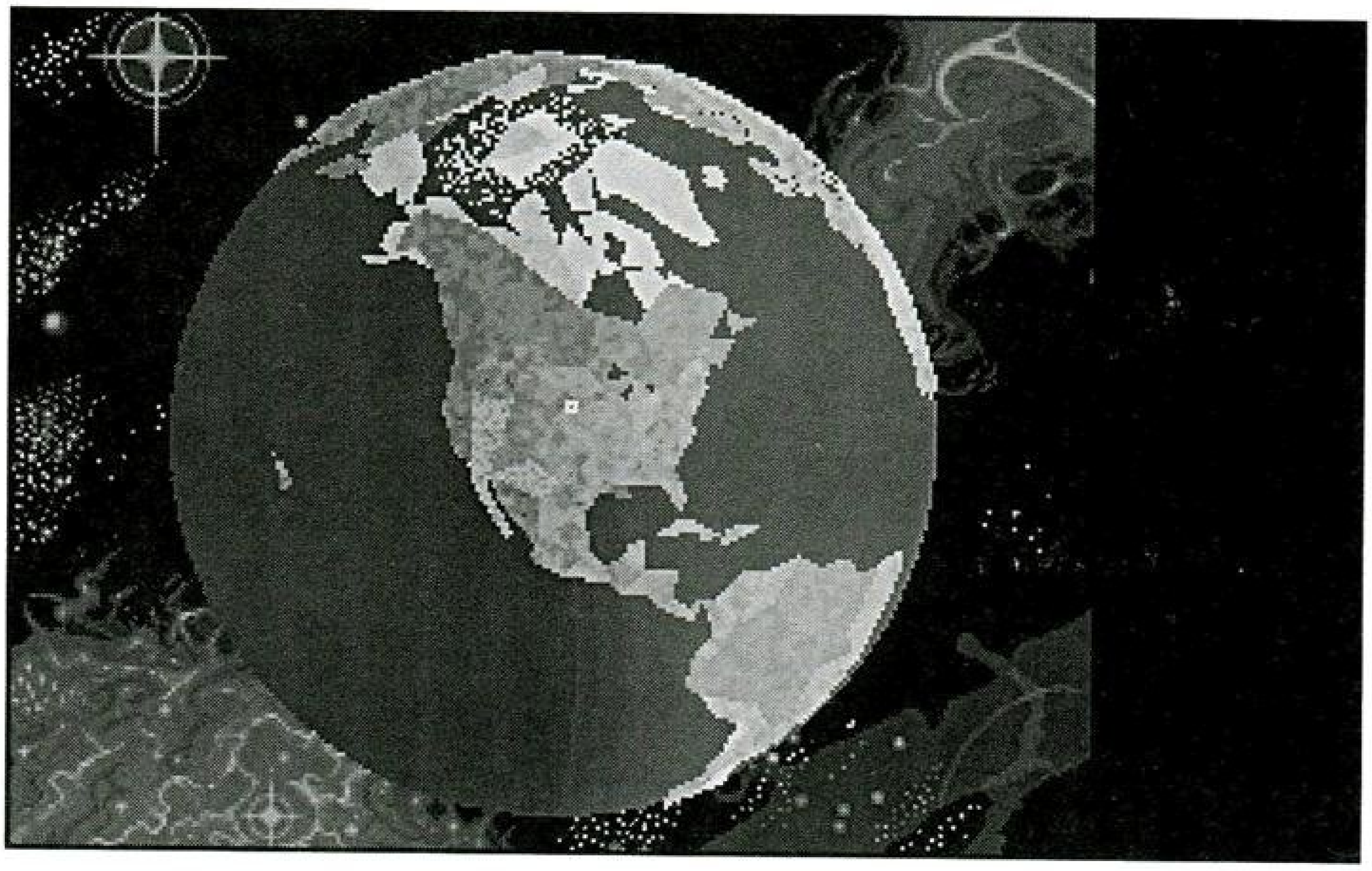


Figure 2-2
The Geoscape main window.

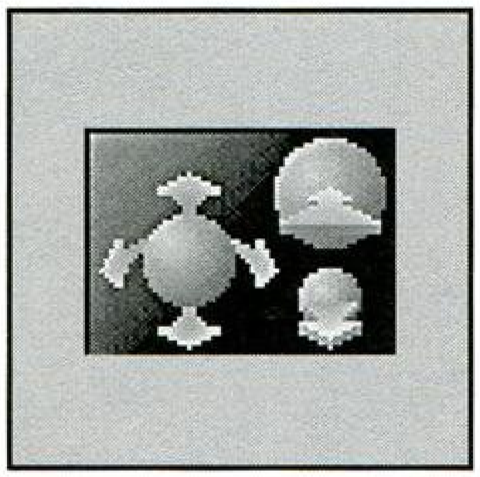


Figure 2-3
The view controls.

THE VIEW CONTROLS

The view controls allow you to control the 3-D map (see Figure 2-3). From here, you can zoom in and out and rotate the globe.

The icon with four arrows controls rotation. Click on an arrow to turn the 3-D view of the Earth in the main window in that direction. To center the view on a specific location, move the mouse cursor to the location on the globe and click the right mouse button.

The icon with the arrow pointing toward it zooms in on the section of the globe currently centered in the main window. Every time you click on this icon, you zoom in more.

The icon with the arrow pointing away from it zooms the 3-D view out. Every time you click on this icon, you zoom out farther.

When you're choosing the location for a base and throughout the early stages of the game, when you have only one base to control, it is easy to keep track of UFO activity by staying centered and zoomed in on the base location. As the game progresses and UFO activity becomes more widespread, however, you may find it easier to keep track of things from a wider perspective.

MAP KEY

Every object has a map symbol in the main window by which it can be identified, as shown in Table 2-1.

USING THE 3-D MAP

The symbols on the 3-D map can also be clicked to provide information and to control various aspects of the game. This section lists

Table 2-1 Geoscape map key

Symbol	Color	Object Represented
□	Blue	X-COM base
□	Pink	Alien Base
□	Red	City
+	Yellow	X-COM Craft in flight
+	Red	UFO in flight
+	Pink	Alien Terror Site
X	Orange	X-COM craft destination (waypoint)
X	Green	UFO Landing Site
X	White	UFO Crash Site

the display and command windows you access by clicking map icons.

The Launch Interception Window

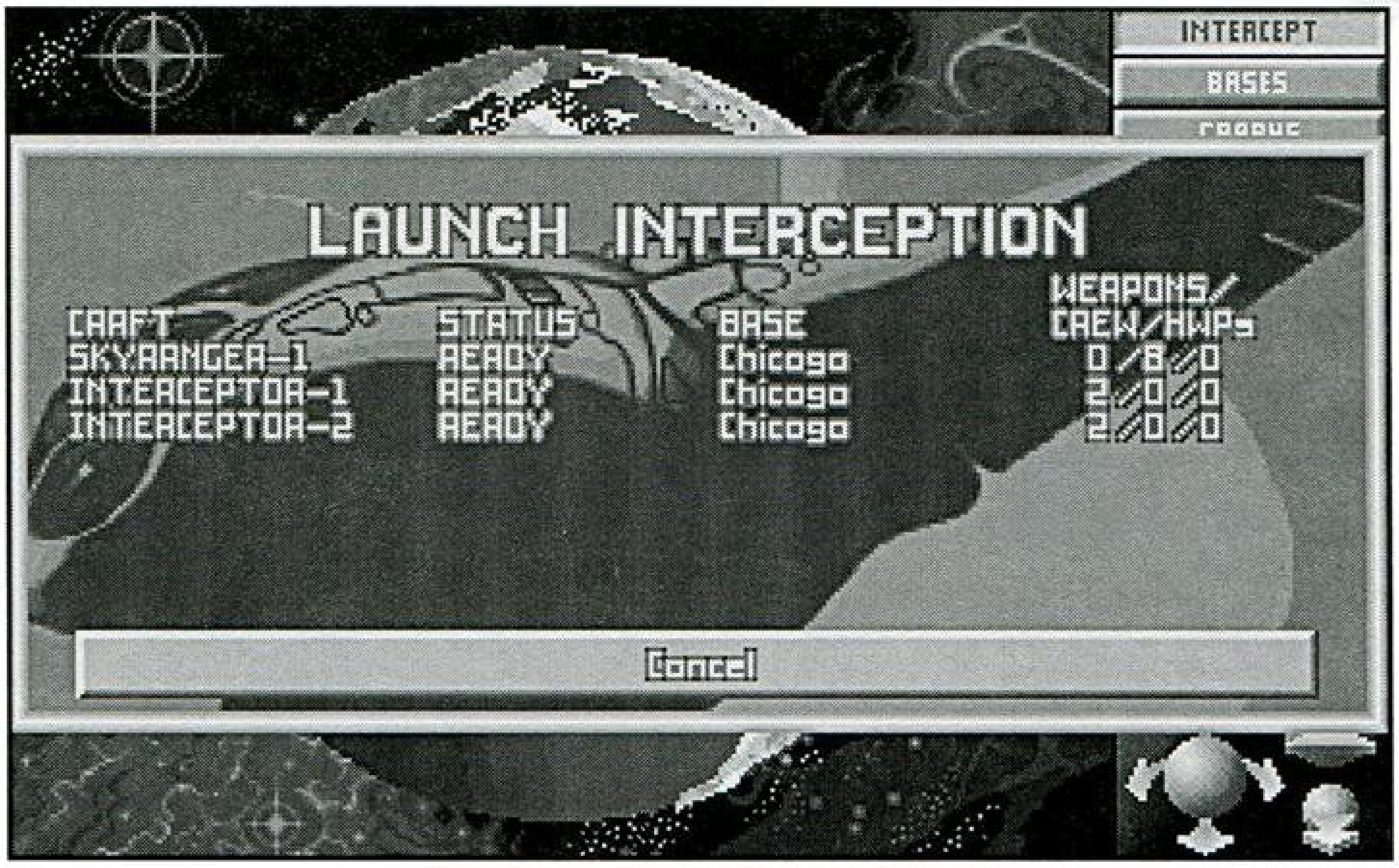
X-COM bases are shown as blue squares on the 3-D map. Clicking on an X-COM base brings up the Launch Interception window (see Figure 2-4).

This display gives you a status report of all the craft stationed at that base. The report shows the following information:

- **Craft.** Indicates the type of craft: Interceptor, Skyranger, Firestorm, Lightning, or Avenger. Beside the craft type is the designation number of the craft. The designation number is automatically assigned when the craft is purchased or built. For example, the third Skyranger purchased is designated as Skyranger-3.
- **Status.** Indicates the current launch availability of the craft:

  Ready: The craft is available for launch.

  Refueling: The craft is refueling and currently unavailable for launch.



LAUNCH INTERCEPTION

CRAFT	STATUS	BASE	WEAPONS/ CREW/HWPs
SKYRANGER-1	READY	Chicago	0/8/0
INTERCEPTOR-1	READY	Chicago	2/0/0
INTERCEPTOR-2	READY	Chicago	2/0/0

Figure 2-4
The Launch Interception window.

Rearming: The craft is reloading its weapons systems and is currently unavailable for launch.

Repairs: The craft is undergoing repairs and is unavailable for launch.

Out: The craft is out of the base on an assigned mission.

- **Base.** Shows the name of the craft's home base.
- **Weapons/Crew/HWPs.** These three numbers show how the craft is equipped:

  Weapons: The number of weapons mounted on the vehicle.

  Crew: The number of soldiers carried aboard the craft. On an intercept-only craft, this number is always 0.

  HWPs: The number of heavy-weapons platforms (tanks and hover-tanks) carried aboard the craft. On an intercept-only craft, this number is always 0.

  Example: An Avenger that shows 2/12/2 in this column of the Launch Interception screen has two ship-mounted weapons, and is carrying 12 soldiers and two heavy-weapons platforms.

In addition to viewing the status of craft at a base, you can use the Launch Interception window to launch X-COM craft on a mission. To launch an available craft, click on the name of the craft. The

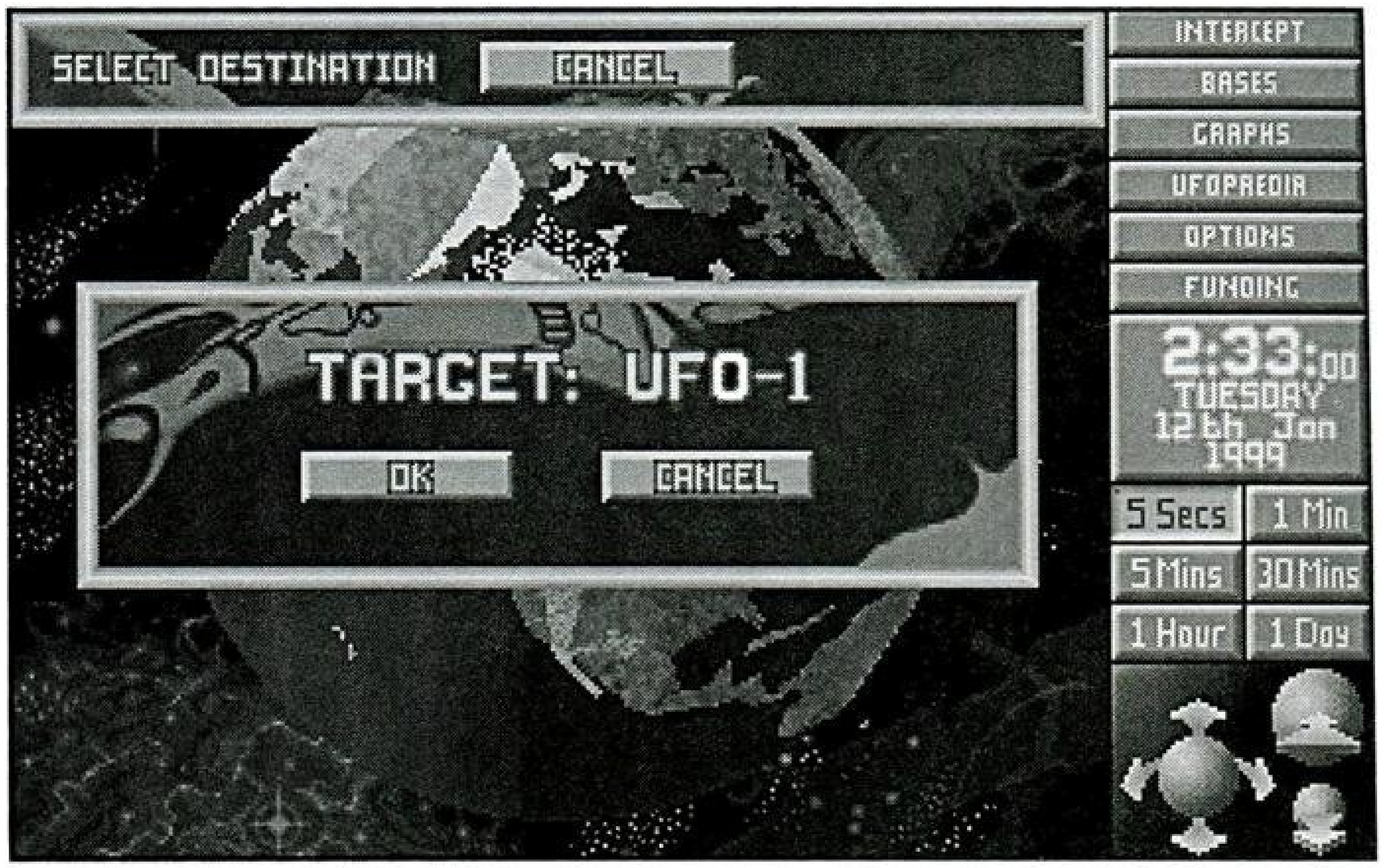

SELECT DESTINATION
CANCEL
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
TARGET: UFO-1
OK
CANCEL
2:33:00
TUESDAY
12th Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 2-5
The Target UFO window.

Launch Interception window disappears, revealing the Geoscape screen and a window requesting that you select a destination. Select the craft's destination by clicking on its location in the 3-D view of the Earth. To select a moving UFO as a target, click on it. When the Target UFO window appears, as shown in Figure 2-5, confirm your choice by clicking the OK button.

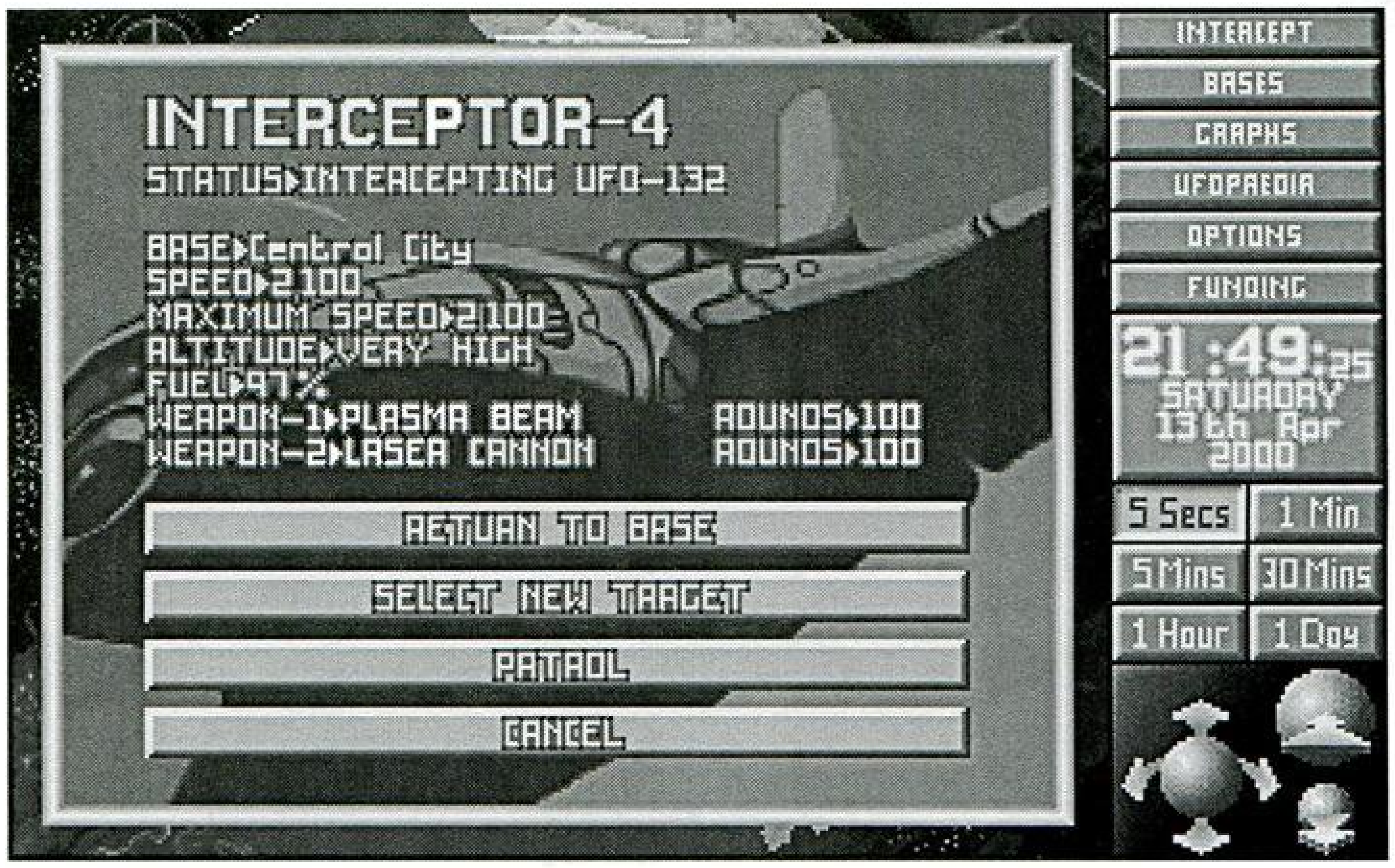
To close the Launch Interception window without launching any craft, click Cancel.

The Craft Status Window

X-COM craft are designated by a moving, yellow **+** (plus sign). Clicking on an X-COM craft in flight brings up the Craft Status window, shown in Figure 2-6.

This window gives the following information about the craft:

- **Craft Name:** The type of craft and its designation number (Skyranger-6, for example)
- **Status:** The craft's current mission or destination
- **Base:** The craft's home base
- **Speed:** The current velocity of the craft in knots
- **Maximum Speed:** The maximum possible speed for this type of craft



INTERCEPTOR-4

STATUS▸INTERCEPTING UFO-132

BASE▸Central City
SPEED▸2100
MAXIMUM SPEED▸2100
ALTITUDE▸VERY HIGH
FUEL▸97%
WEAPON-1▸PLASMA BEAM ROUNDS▸100
WEAPON-2▸LASER CANNON ROUNDS▸100

21:49:25
SATURDAY
13th Apr
2000

Figure 2-6
The Craft Status window of an Interceptor.

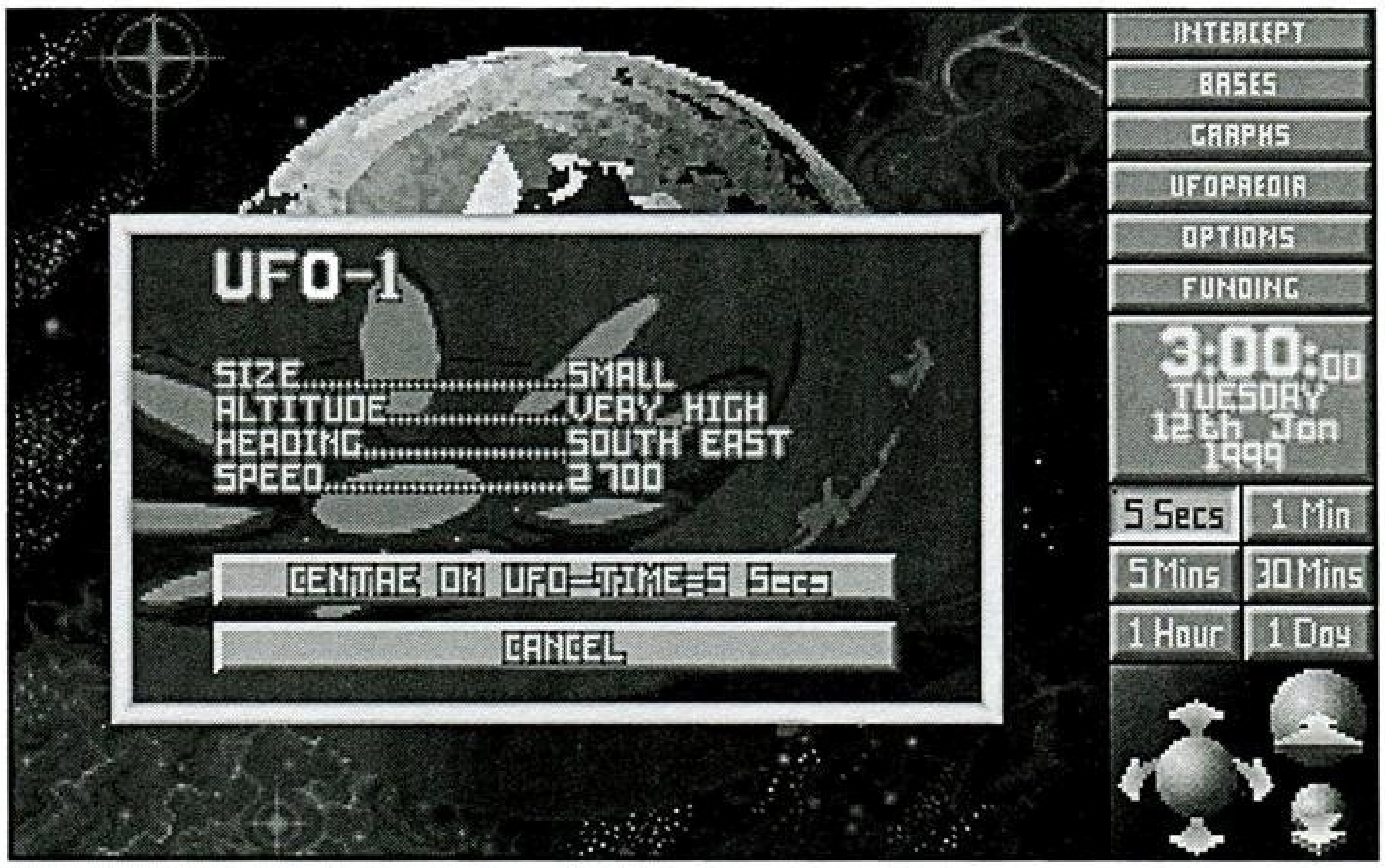
- **Altitude:** The craft's general altitude (very low, low, high, very high)
- **Fuel:** The percentage of fuel remaining in the craft; the craft automatically returns to its base when the fuel level becomes critical
- **Weapon-1/Rounds:** The type of weapon loaded in Weapons Bay 1, followed by the number of shots remaining in the weapon
- **Weapon-2/Rounds:** The type of weapon loaded in Weapons Bay 2, followed by the number of shots remaining in the weapon

In addition to information about the craft, the Craft Status window is used to give in-flight instructions to the craft. From this window, you can order the craft to return to base, select a new target for the craft, and order the craft to patrol in its current vicinity. To close the Craft Status window, click Cancel.

The UFO Status Window

A UFO in flight is shown as a moving, red +. Clicking on an in-flight UFO or a UFO Landing Site displays the UFO Status window (see Figure 2-7).

This window also appears when a UFO is first detected by your tracking systems. It displays the following information about the UFO:



UFO-1

SIZE..........SMALL
ALTITUDE..........VERY HIGH
HEADING..........SOUTH EAST
SPEED..........2 700

CENTRE ON UFO-TIME=5 Secs
CANCEL
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
3:00:00
TUESDAY
12th Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

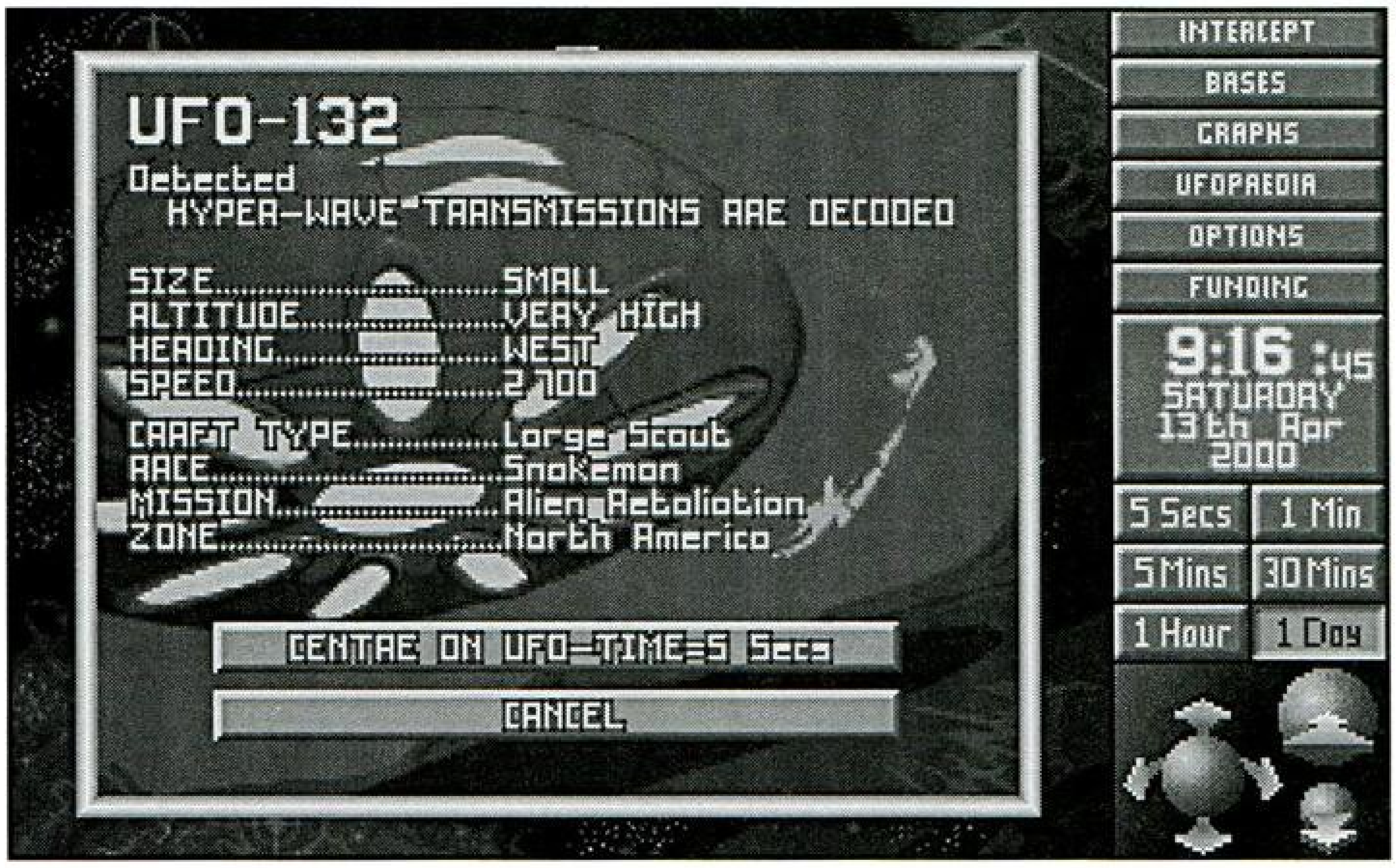
Figure 2-7
The UFO Status Window.

- **UFO Designation:** The number of the UFO being tracked. UFOs are identified by a number corresponding with the order in which they are detected. For instance, the fifth UFO tracked by one of your bases is designated UFO-5.
- **Size:** The general size-class of the UFO (very small, small, medium, large, very large).
- **Altitude:** The UFO's general altitude (very low, low, high, very high).
- **Heading:** The current direction of the UFO's flight path.
- **Speed:** The UFO's current speed in knots.

If you are tracking a UFO and one of your bases is equipped with a Hyper-wave Decoder, you receive more detailed information. The UFO Status window that is shown when a Hyper-wave Decoder is tracking a UFO is shown in Figure 2-8.

By analyzing and decoding the alien's communications frequencies, the Hyper-wave Decoder can provide you with the following additional information:

- **Craft Type:** The variety of UFO being tracked (Battleship, Terror Ship, Supply Ship, etc.)



UFO-132

Detected

HYPER-WAVE TRANSMISSIONS ARE DECODED

SIZE.......................SMALL
ALTITUDE...................VERY HIGH
HEADING....................WEST
SPEED......................2700
CRAFT TYPE.................Large Scout
RACE.......................Snakeman
MISSION....................Alien Retaliation
ZONE.......................North America

9:16 :45
SATURDAY
13th Apr
2000

Figure 2-8
The UFO Status window when you're using a Hyperwave Decoder.

- **Race:** The type of aliens on board the UFO
- **Mission:** The UFO's current objective (Infiltration, Alien Terror, Supply, etc.)
- **Zone:** The country or territory that is the craft's destination

The additional UFO status information provided by the Hyperwave Decoder can be helpful in planning intercept missions:

- Knowing which kind of craft you are up against helps determine which interceptor craft (and how many of them!) to send out. Just knowing that a ship is classified as large tells you nothing about how well that ship is armed.
- Knowledge of what race is on the UFO allows you to make good weapons choices for troops sent to salvage or invade the UFO when it is grounded.
- Knowledge of the UFO's mission can give you clues about what type of events to expect in the near future. For instance, if you detect a UFO whose mission is Alien Terror, you can bet that, if the craft is allowed to land, a terror site will soon appear. This knowledge can also help you to pinpoint the location of alien bases by tracking UFOs that are on Supply missions to their destinations.

In addition to the preceding information, the UFO Status window also gives you the option to center the Geoscape map on the UFO. This option is most useful when the UFO Status window first appears, because the craft being tracked may be out of view on the Geoscape. Click on the Center on UFO - Time = 5 Secs button to center the map on the UFO. This option also slows the passage of game time to a minimum. (See the section "The Game Time Controls," later in this chapter, for details.)

To exit from the UFO Status window without centering on the UFO, click the Cancel button.

UFO Landing and Crash Sites

When a UFO lands, its landing site is marked by a green **X** on the 3-D map. It is still identified by its UFO designation number (UFO-5, for example).

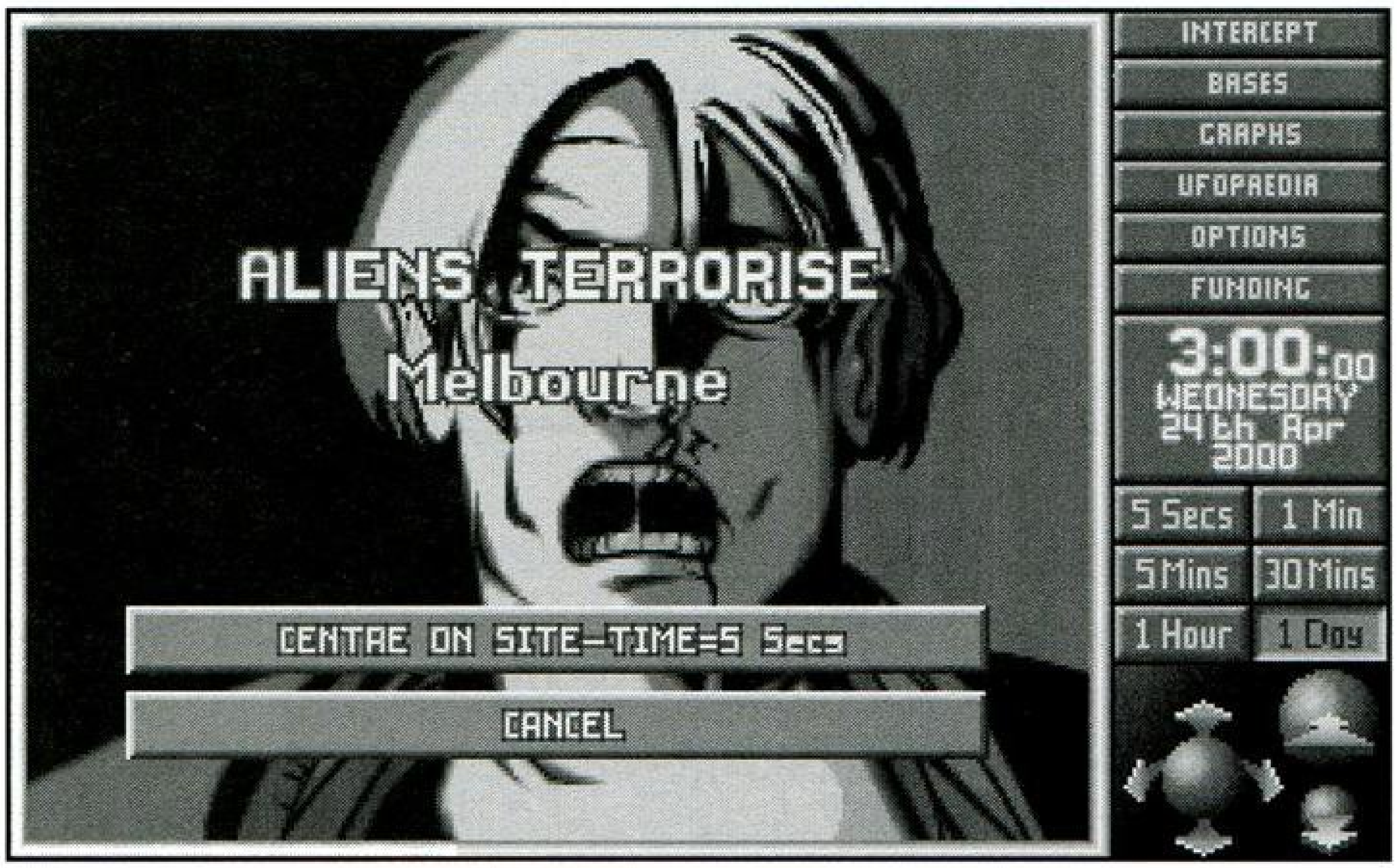
When a UFO has been shot down by an intercept craft and crash-lands on dry land, it is called a crash site. Crash sites, marked by a white **X** on the 3-D map, are designated with a number that corresponds to the UFO's original designation (that is, if you shoot down UFO-5 over land, it crashes and becomes Crash Site-5).

Clicking on either a landing site or a crash site brings up the UFO Status window, described earlier in this chapter.

Terror Sites and Alien Bases

A terror site is a city in which aliens have landed and are systematically terrorizing and killing the civilians. Terror sites are shown on the 3-D map as a pink **+** superimposed over the red square of a city. Like UFOs, terror sites are designated with a number indicating the order in which they appear (Terror Site-1, Terror Site-2, for example). When aliens begin to terrorize the citizens of a city, you are notified with a message screen, as shown in Figure 2-9.

Alien bases are large outposts set up by the aliens for the local control of terror missions and other operations. They are shown on the 3-D map as pink squares. They are designated with a number corresponding to the order in which they are discovered (Alien Base-1, Alien Base-2, for example).



ALIENS TERRORISE
Melbourne

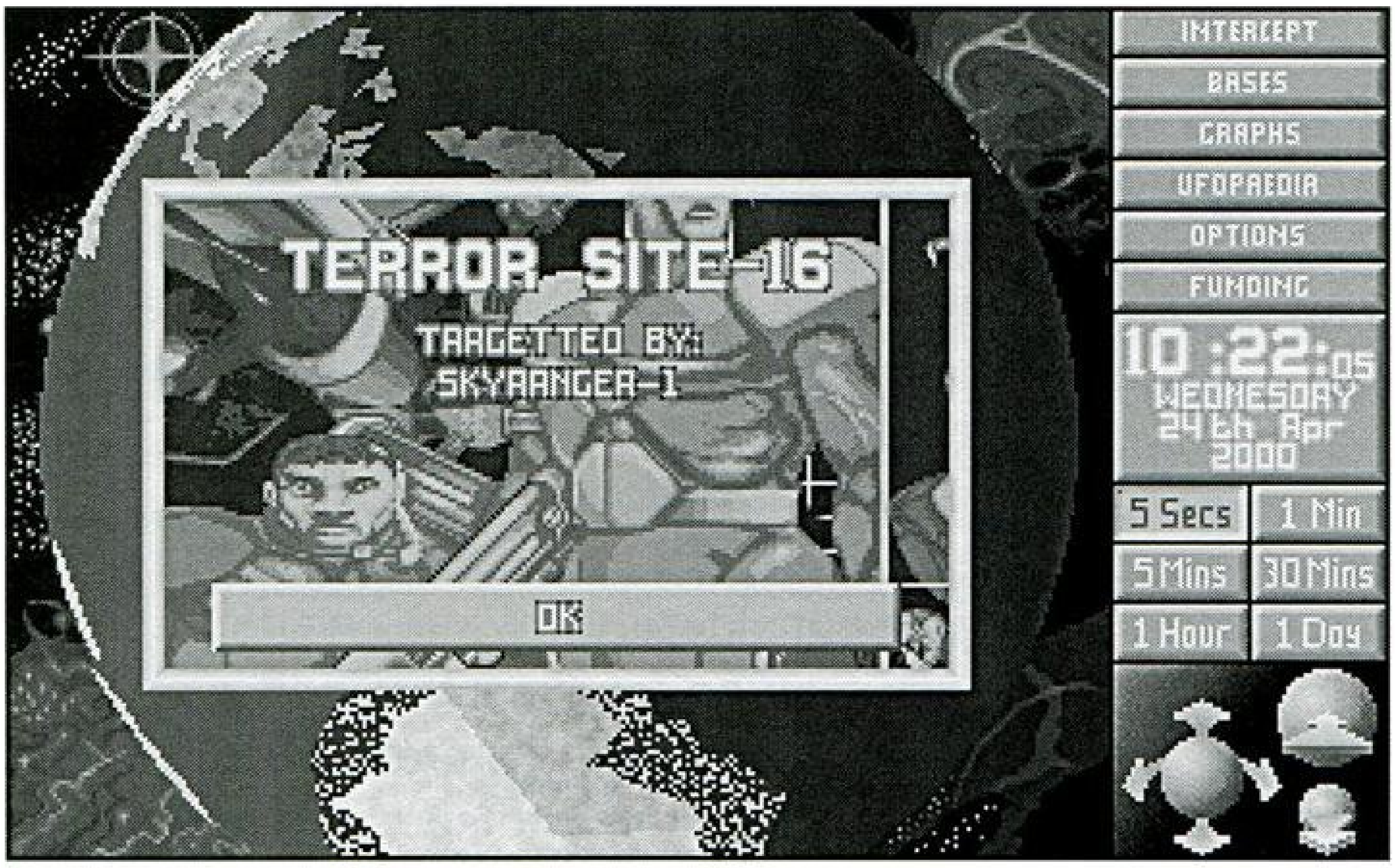
CENTRE ON SITE-TIME=5 Secs
CANCEL
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
3:00:00
WEDNESDAY
24th Apr
2000
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 2-9
Notification of an alien terror mission.

Clicking on a terror site or an alien base displays its numeric designation and shows the name of any X-COM craft that are en route to it (see Figure 2-10).

Cities

Cites appear on the 3-D map as red squares with yellow centers. At maximum zoom levels, the names of the cities are also shown. Only



TERROR SITE-16
TARGETTED BY:
SKYRANGER-1

OK
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
10:22:05
WEDNESDAY
24th Apr
2000
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 2-10
Terror Site information window.

a handful of major cities are represented in the game. Cities under siege by an alien terror mission have a pink **+** superimposed over their icons.

City icons produce no information when you click them.

THE GAME TIME DISPLAY

The time display appears on the right side of the screen, in the center. It shows the current day, date, month, and year as well as a running display of the time of day.

Every new game of X-COM: UFO Defense begins at 12 noon on January 1, 1999. The displayed time is Greenwich mean time (the time along the prime meridian, which runs through Greenwich, England). It is not based on what time it would be at your base, at a combat site, etc.

Game time passes in increments ranging from five seconds to one day. The speed of time passage is up to you, as explained in the next section.

THE GAME TIME CONTROLS

Directly below the game time display are the game time controls (see Figure 2-11). These buttons allow you to change the rate at which time passes within the game. Game time passes in incremental jumps; the larger the increment, the faster time passes. When the game begins, time is passing at its slowest rate—in five-second increments. You can adjust this rate to suit your needs, making each increment of time passage as large as one day.

When you exit from the Geoscape or when a menu is active, the passage of time is suspended until you return to the Geoscape or exit from the menu.

The ability to change the rate of time passage speeds up the game considerably. While awaiting the end of a research project or while waiting for your tracking systems to detect a UFO, the time can be set to pass in increments of an hour or a day at a time. When one of your craft is dispatched on an intercept or a ground attack

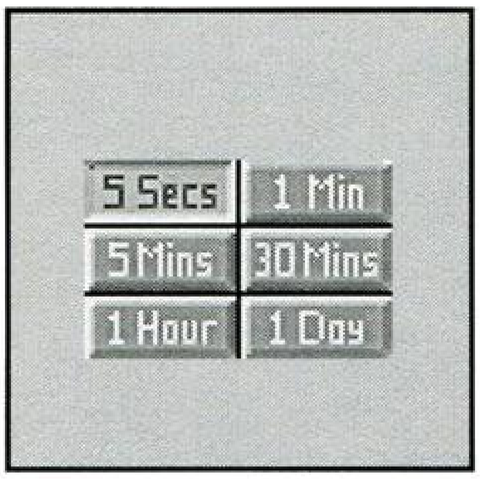


Figure 2-11
The game time controls.

that is far from its home base, you can speed along its passage by allowing time to pass in half-hour increments.

In practice, most of the time you will usually want time to pass in large increments. The only time it is really necessary to switch to slower time passage is when you want to choose menu options and perform various game functions.

THE GEOSCAPE MENU OPTIONS

On the top right side of the Geoscape screen are the Geoscape menu options (see Figure 2-12). By clicking on these six buttons, you have access to various information and action menus in addition to access to other sections of the game.

INTERCEPT

Clicking the Intercept button brings up a comprehensive Launch Interception window. As indicated earlier, a version of this window can be opened by clicking on a base icon on the 3-D map.

The advantage of accessing the Launch Interception window from the Options menu is that when it is opened from the menu, the Launch Interception window lists craft from every operational X-COM base, as shown in Figure 2-13.

This method prevents the need for clicking on each base in order to find an available craft for a mission. From here, you can launch or check the status of an intercept or transport craft from a base hidden from view on the opposite side of the globe without having to rotate the map.

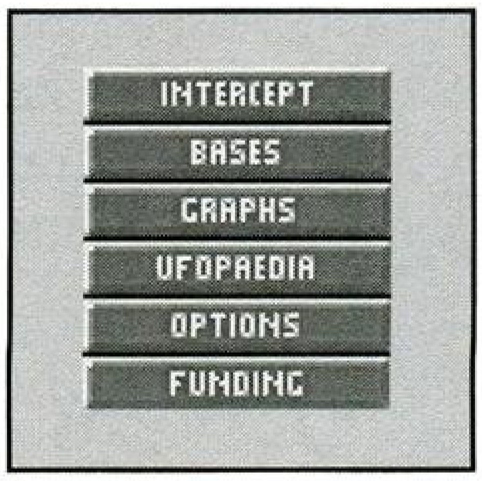

INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING

Figure 2-12
The Geoscape menu options.

To exit from the Launch Interception window without launching any craft, click the Cancel button.

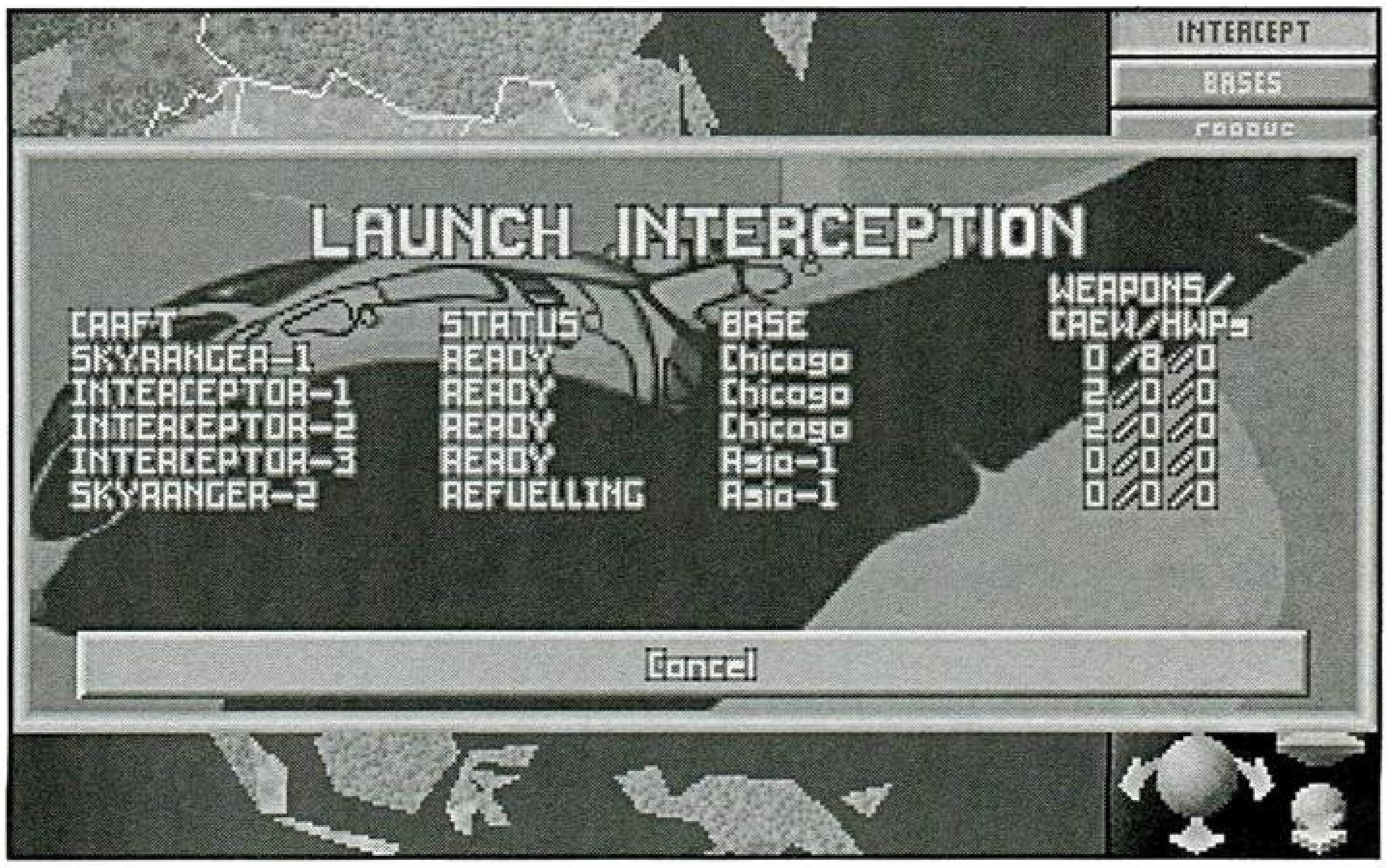
BASES

Clicking the Bases button takes you to the Base Display (see Figure 2-14).

From the Base Display, you perform all your buying, selling, building, researching, and other micromanagement functions. This screen also gives you a close-up view of each base and its status.

To exit from the Base Display, click the Geoscape button.

For detailed information about the Base Display, see Chapter 3, "X-COM Bases."


INTERCEPT
BASES
LAUNCH INTERCEPTION
Cancel

CRAFT	STATUS	BASE	WEAPONS/ CREW/HWPs
SKYRANGER-1	READY	Chicago	0/8/0
INTERCEPTOR-1	READY	Chicago	2/0/0
INTERCEPTOR-2	READY	Chicago	2/0/0
INTERCEPTOR-3	READY	Asia-1	0/0/0
SKYRANGER-2	REFUELLING	Asia-1	0/0/0

Figure 2-13
The Launch Interception window when it's opened from the Option menu.

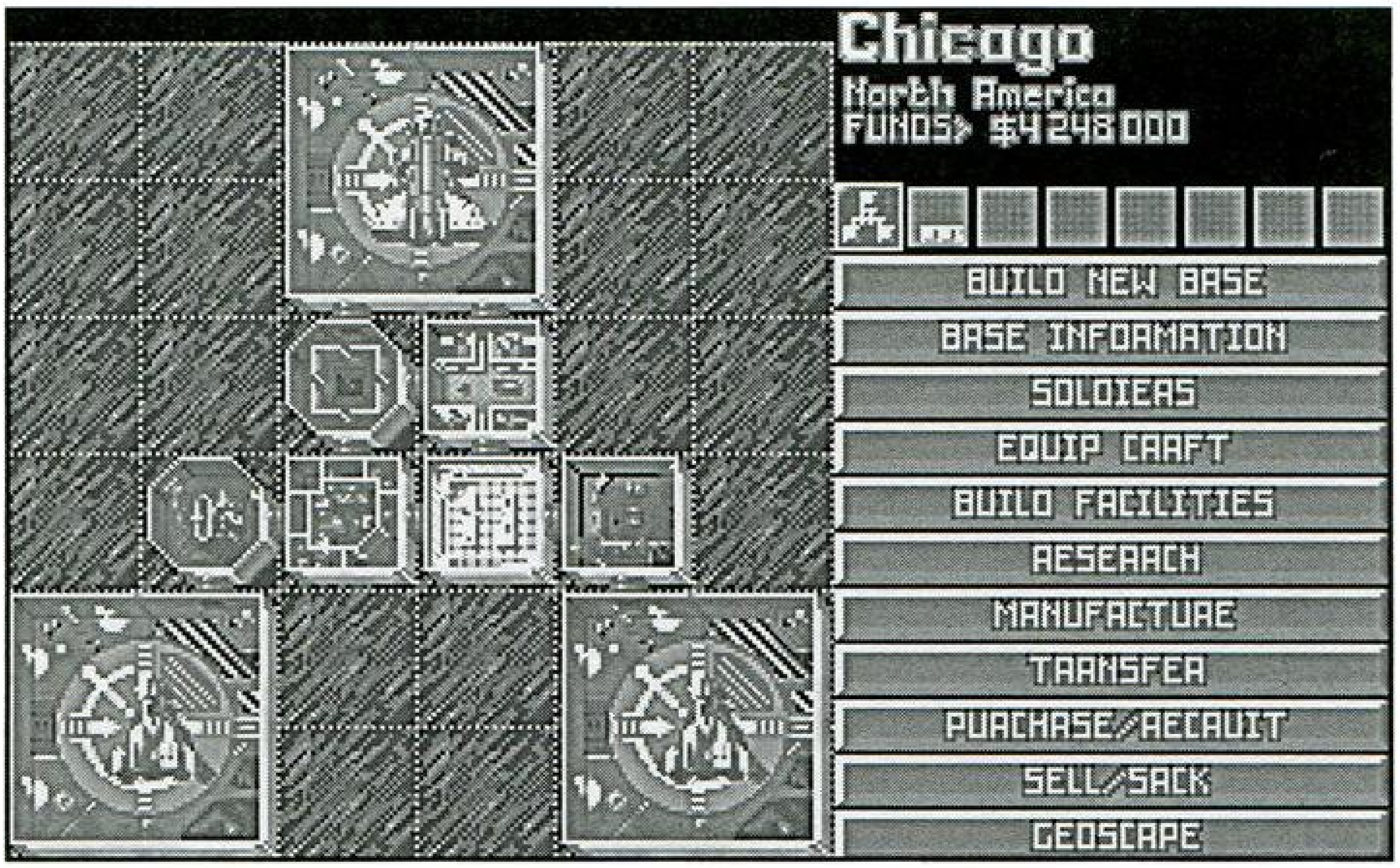

Chicago
North America
FUNDS> $4248000
BUILD NEW BASE
BASE INFORMATION
SOLDIERS
EQUIP CRAFT
BUILD FACILITIES
RESEARCH
MANUFACTURE
TRANSFER
PURCHASE/RECRUIT
SELL/SACK
GEOSCAPE

Figure 2-14
The Base Display.

GRAPHS

Clicking the Graphs button gives you access to a number of statistical graphs detailing X-COM status and funding and UFO activity. This data is useful in planning the location of new bases and in planning your overall defense strategy.

The graphs are accessed by clicking on the icons shown along the top of the screen. The icons for each graph, and the details of the graphs, are described in the following sections.

UFO Activity in Areas

The UFO Activity in Areas graph shows the number of UFO incidents in various geographical areas of the world over time (see Figure 2-15). This graph appears when you first click the Graphs button from the Geoscape menu. It plots the number of UFO sightings and incidents along the vertical (or Y-) axis, and the date along the horizontal (or X-) axis.

Along the left side of the screen is a row of buttons that lists all continents and territories in the world. To see information about a particular area, click its corresponding button. A colored line appears on the graph, showing the UFO activity in that country; the button changes color when it's clicked, to match its corresponding graph line. Clicking the Total button plots the total number of UFO incidents in all territories represented.

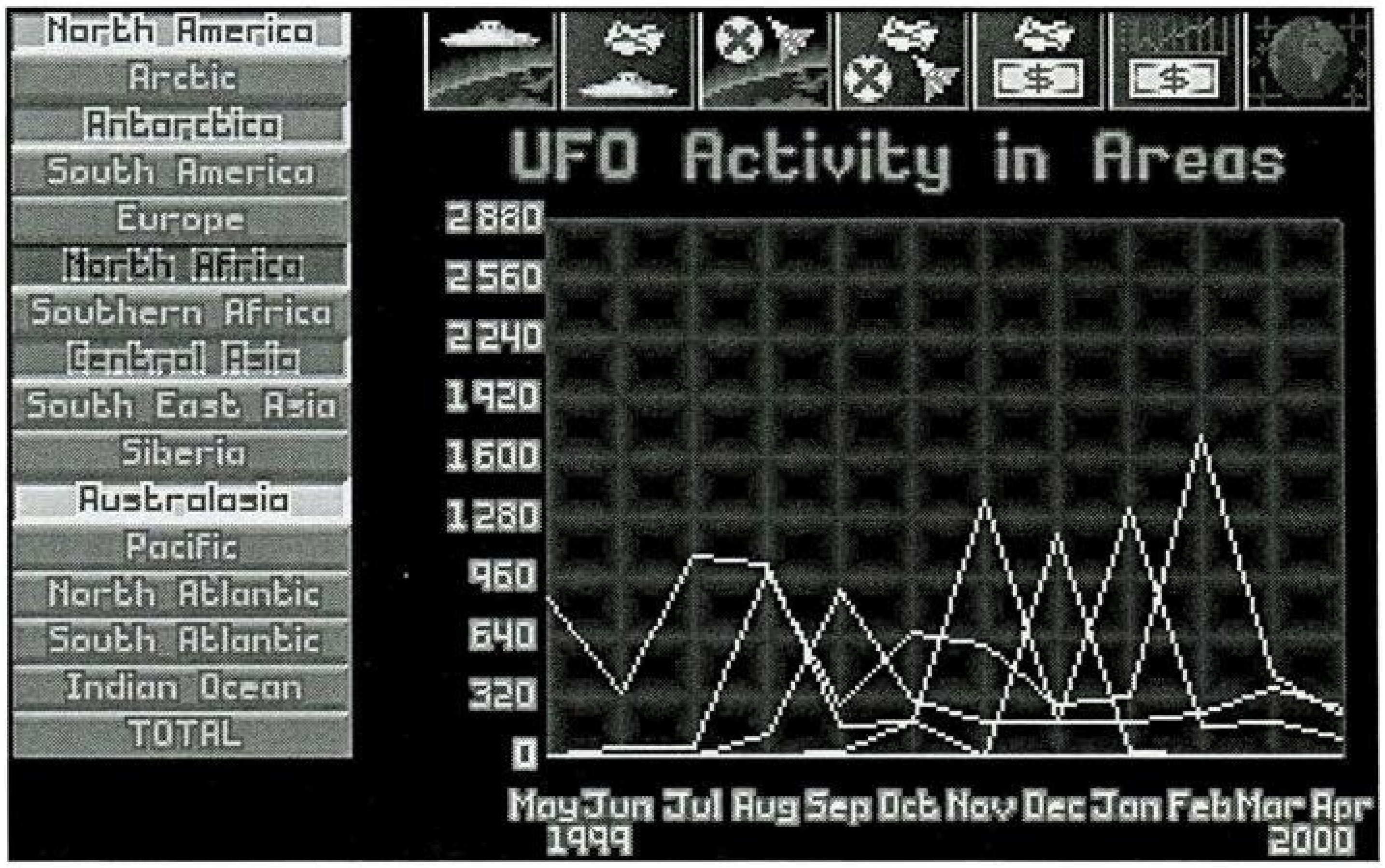

North America
Arctic
Antarctica
South America
Europe
North Africa
Southern Africa
Central Asia
South East Asia
Siberia
Australasia
Pacific
North Atlantic
South Atlantic
Indian Ocean
TOTAL
UFO Activity in Areas
2880
2560
2240
1920
1600
1280
960
640
320
0
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
1999
2000

Figure 2-15
The UFO Activity in Areas graph.

This graph gives you good general information about the areas of the world in which UFO activity is the highest.

UFO Activity in Countries

The UFO Activity in Countries graph shows the number of UFO incidents in each of the countries of the world that contribute funds to X-COM over time (see Figure 2-16). Like the UFO Activity in Areas graph, it plots the number of UFO sightings and incidents along the Y-axis, and the date along the X-axis.

Along the left side of the screen is a row of buttons that lists all the X-COM funding nations. To see information about a particular country, click its corresponding button. A colored line appears on the graph, showing the UFO activity in that country; the button changes color when it's clicked, to match its corresponding graph line. Clicking the Total button plots the total number of UFO incidents in all funding nations.

The UFO Activity in Countries graph provides even more useful information than the UFO Activity in Areas graph does. The information presented here allows you to make an intelligent choice for the location of new bases, by allowing you to choose a wealthy country with high UFO activity in which to build.

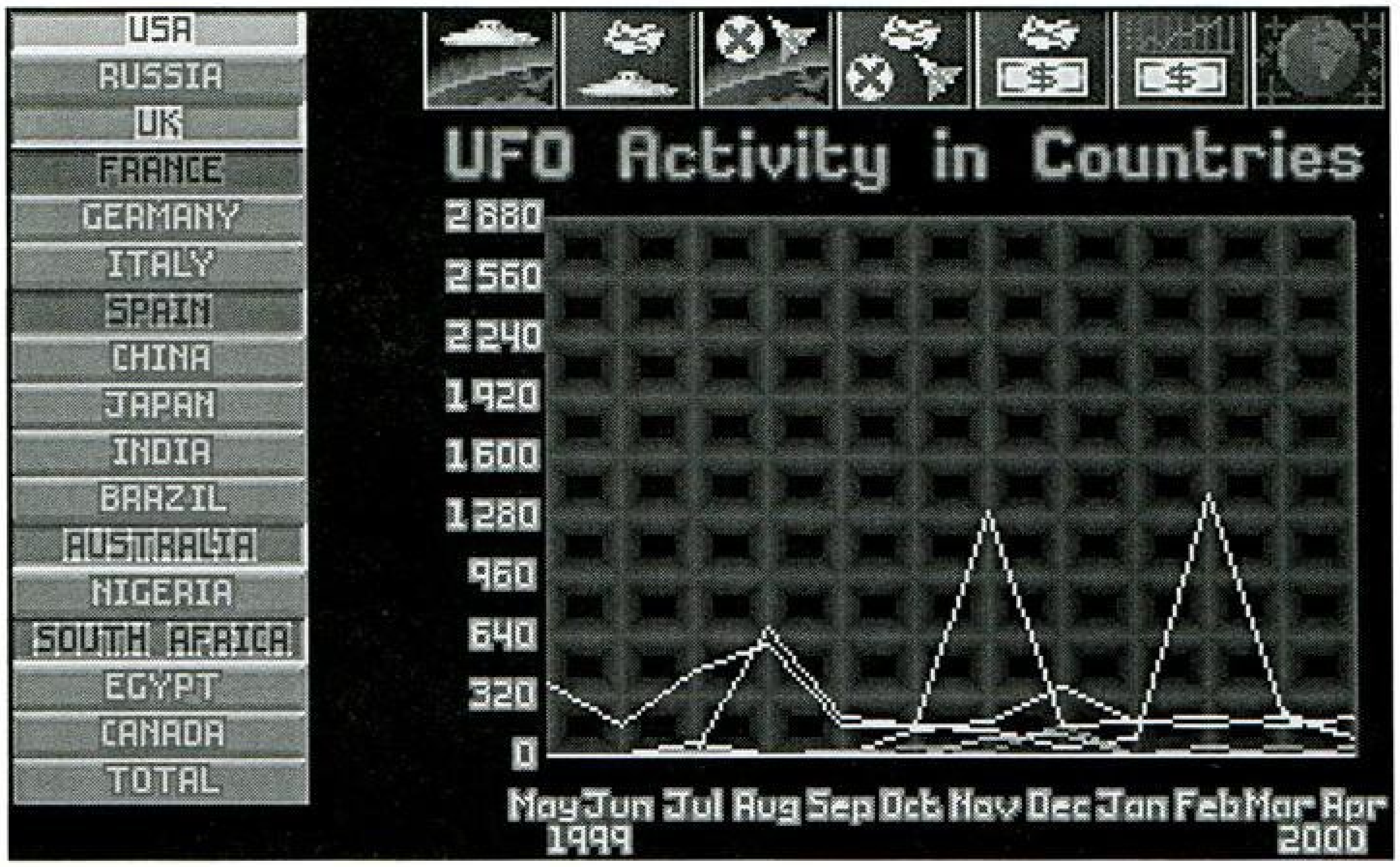

USA
RUSSIA
UK
FRANCE
GERMANY
ITALY
SPAIN
CHINA
JAPAN
INDIA
BRAZIL
AUSTRALIA
NIGERIA
SOUTH AFRICA
EGYPT
CANADA
TOTAL
UFO Activity in Countries
2880
2560
2240
1920
1600
1280
960
640
320
0
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
1999
2000

Figure 2-16
The UFO Activity in Countries graph.

X-COM Activity in Areas

The X-COM Activity in Areas graph shows the level of X-COM intervention in various geographical areas of the world over time (see Figure 2-17). It plots the number of X-COM intercept and combat missions along the Y-axis, and the date along the X-axis.

Along the left side of the screen is a row of buttons that lists all continents and territories in the world. To see information about a particular area, click its corresponding button. A colored line appears on the graph, showing the X-COM activity in that country; the button changes color when it's clicked, to match its corresponding graph line. Clicking the Total button plots the total number of X-COM missions in all territories represented.

This information, when compared and contrasted with the UFO Activity in Areas graph, gives you a good indication of whether X-COM forces are being responsive enough to the areas of the world in which UFO activity is the highest. If X-COM activity is extremely high in an area in which UFO activity is relatively low, you should think about deploying X-COM forces in a more effective manner.

X-COM Activity in Countries

The X-COM Activity in Countries graph shows the levels of X-COM activity in each of the countries of the world that contribute funds

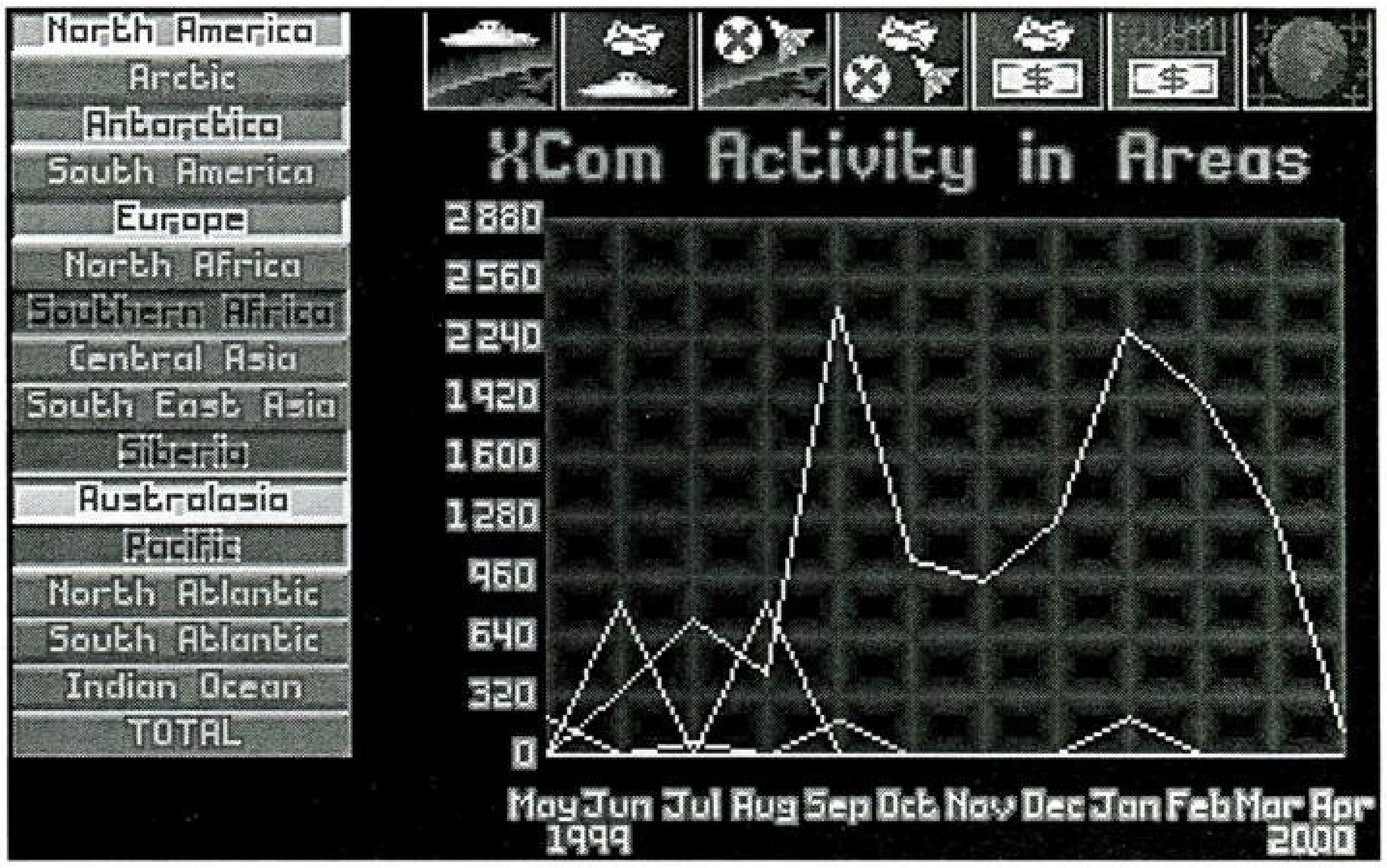

North America
Arctic
Antarctica
South America
Europe
North Africa
Southern Africa
Central Asia
South East Asia
Siberia
Australasia
Pacific
North Atlantic
South Atlantic
Indian Ocean
TOTAL
XCom Activity in Areas
2880
2560
2240
1920
1600
1280
960
640
320
0
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
1999
2000

Figure 2-17
The X-COM Activity in Areas graph.

to X-COM over time (see Figure 2-18). Like the X-COM Activity in Areas graph, it plots the number of X-COM interceptions and ground missions along the Y-axis, and the date along the X-axis.

Along the left side of the screen is a row of buttons that lists all the X-COM funding nations. To see information about a particular country, click its corresponding button. A colored line appears on the graph, showing the X-COM missions in that country; the button changes color when it's clicked, to match its corresponding graph line. Clicking the Total button plots the total number of X-COM missions in all funding nations.

This graph should be studied closely from time to time and compared to the UFO Activity in Countries graph. X-COM's continued funding from participating nations depends largely on your success in keeping UFO activity in the funding countries. If you see that UFO incidents are on the rise in a country in which X-COM has intervened relatively few times, it is a good bet that the country in question will soon reduce or cut off its funding to X-COM. You should be particularly careful to keep X-COM activity as high as possible in the richer nations of the world, such as the United States and Japan.

Income

The Income graph shows the amount of funding X-COM is receiving from each contributing country over time (see Figure 2-19). The

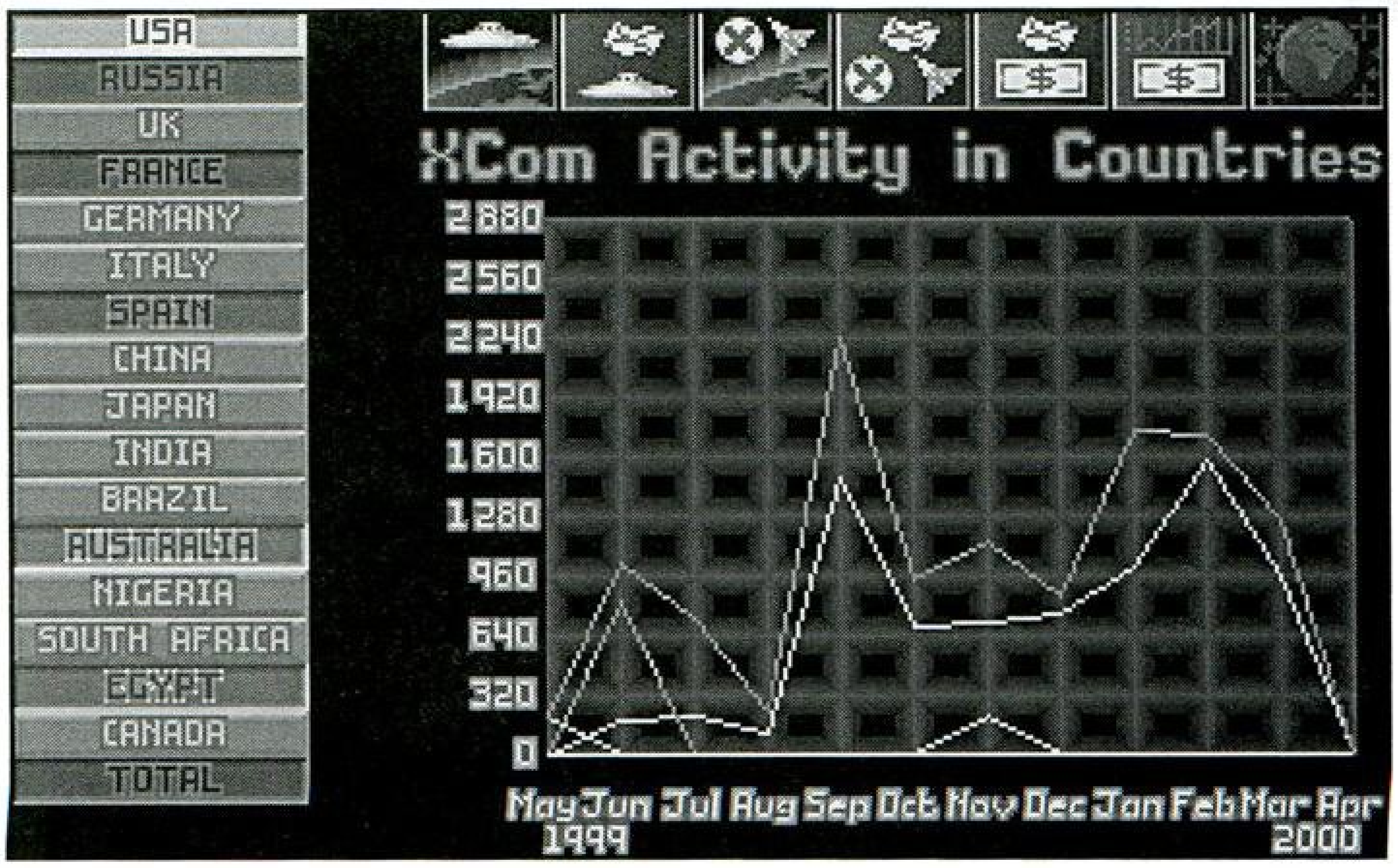

USA
RUSSIA
UK
FRANCE
GERMANY
ITALY
SPAIN
CHINA
JAPAN
INDIA
BRAZIL
AUSTRALIA
NIGERIA
SOUTH AFRICA
EGYPT
CANADA
TOTAL
XCom Activity in Countries
2880
2560
2240
1920
1600
1280
960
640
320
0
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
1999
2000

Figure 2-18
The X-COM Activity in Countries graph.

amount of money, shown in thousands of dollars, is plotted along the Y-axis, and the date is plotted along the X-axis.

Along the left side of the screen is a row of buttons that lists all the X-COM funding nations. To see the amount of contributions from a particular country, click its corresponding button. A colored line appears on the graph, showing the contributions made by that country; the button changes color when it's clicked, to match its

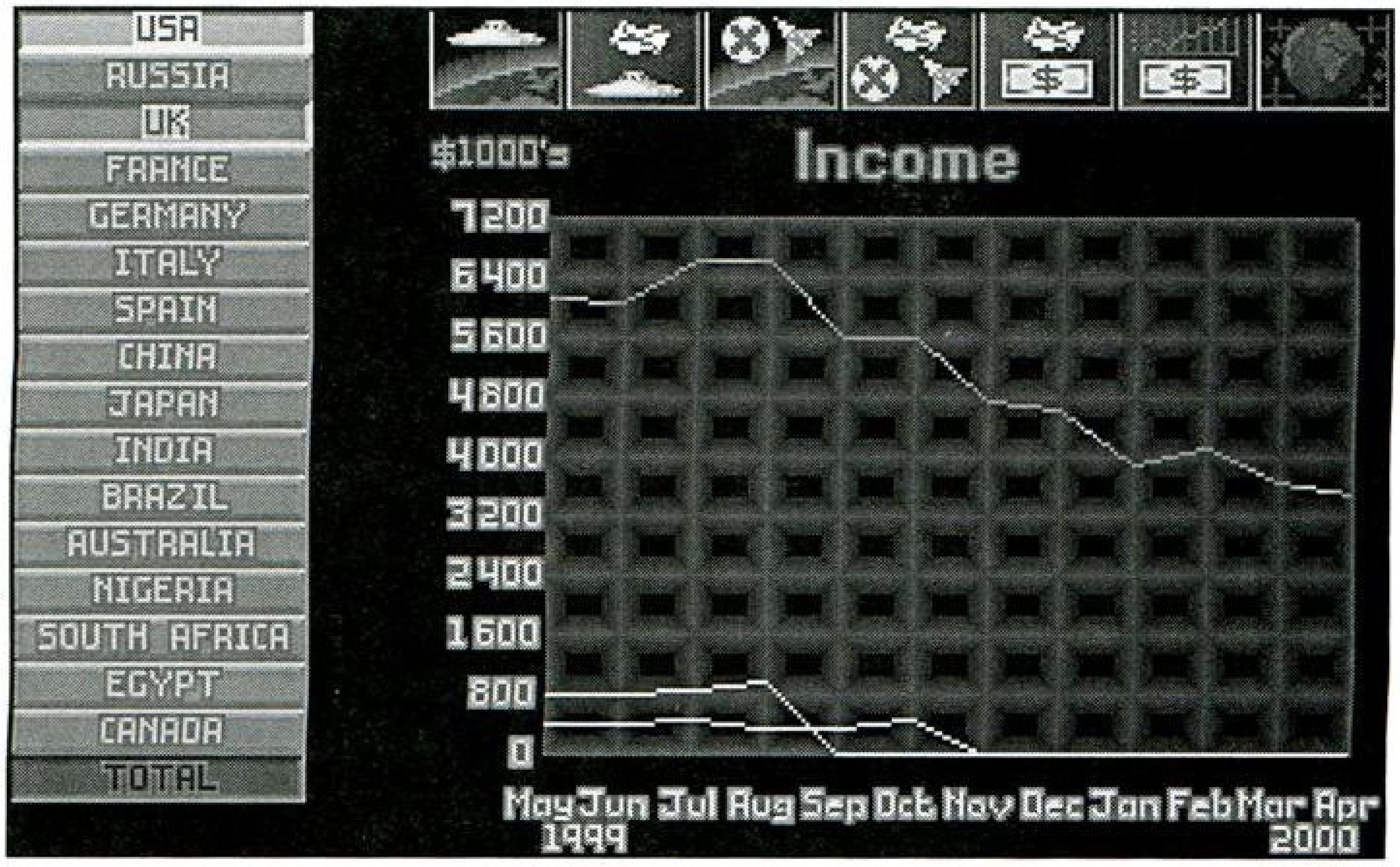

USA
RUSSIA
UK
FRANCE
GERMANY
ITALY
SPAIN
CHINA
JAPAN
INDIA
BRAZIL
AUSTRALIA
NIGERIA
SOUTH AFRICA
EGYPT
CANADA
TOTAL
$1000's
Income
7200
6400
5600
4800
4000
3200
2400
1600
800
0
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
1999
2000

Figure 2-19
The Income graph.

corresponding graph line. Clicking the Total button plots the total contributions from all participating nations combined.

This graph is perhaps the quickest way to see whether X-COM is doing a good job in any particular country. If you look at the Income graph for a country and notice that it steadily drops off as game time progresses, it's a good bet that you just aren't doing things right in that country. If you check this graph every once in a while, you can correct this problem before a participating nation cuts off its funding forever.

Finance

The Finance graph displays your overall monetary situation (see Figure 2-20). Like the Income graph, money in thousands of dollars is plotted along the Y-axis, and the date is plotted along the X-axis.

Each of the five buttons on the left side of this graph displays a different facet of X-COM's status. Click on a button for information about a particular topic. A colored line appears on the graph, plotting the information, and the button changes color to match the line.

The following information is available on the Finance graph:

- **Income:** Income for X-COM operations comes primarily from the contributions of participating nations. Additional income can be generated from the sale of alien artifacts and other items. Unlike the Total option on the Income graph, which plots only the contribution of member nations to X-COM, this graph plots the overall income from *all* sources over time.
- **Expenditure:** Plots the costs of new acquisitions. Expenditures include: building new bases and base facilities; purchasing and manufacturing new items; transfer costs; and recruiting costs for new personnel.
- **Maintenance:** Plots the normal, month-to-month operating costs of X-COM. Maintenance costs include: maintenance costs for base facilities; salaries for soldiers, scientists, and engineers; and the rental, repair, and refueling of X-COM craft.
- **Balance:** Plots the amount of money left over after expenditures and maintenance costs have been subtracted from total income.

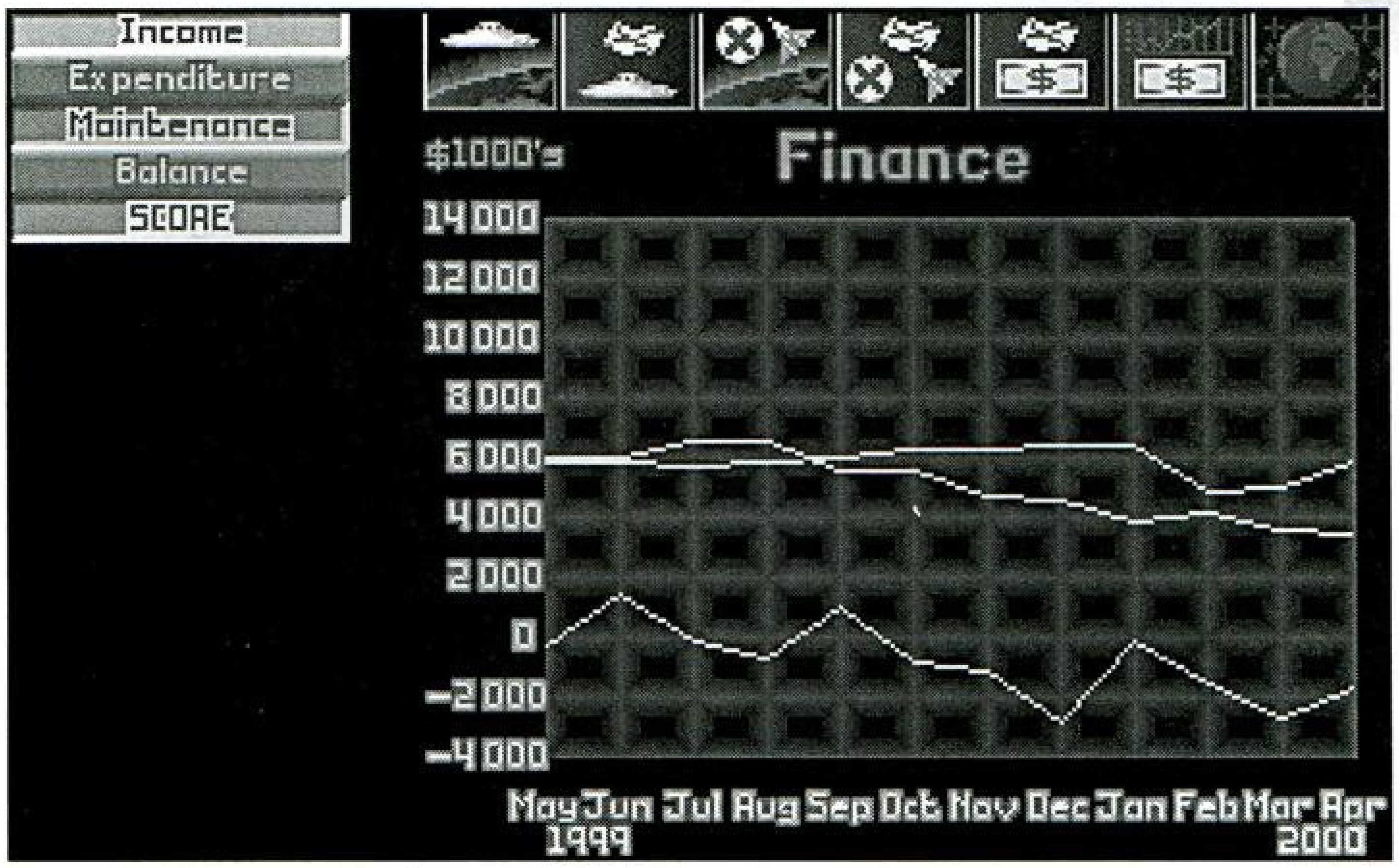

Income
Expenditure
Maintenance
Balance
SCORE
$1000's
Finance
14 000
12 000
10 000
8 000
6 000
4 000
2 000
0
-2 000
-4 000
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
1999
2000

Figure 2-20
The Finance graph.

- **Score:** Has little to do with Finance but is included as an option here because there is nowhere else to put it. Score plots X-COM's performance rating over the course of the game. For the purposes of this graph, the Y-axis plots the number of points, and the X-axis plots the date.

  The Score graph takes the following factors into account:

  The number of successful UFO interceptions

  Scores for all Ground Assault missions

  The amount of research work completed

  The amount of alien activity (the lower, the better)

A positive score indicates that X-COM forces are winning. A negative score shows that the aliens are winning. Ideally, this graph should show a steady rise, with few or no drop-offs along the way.

The Finance graph provides many important statistics you should check frequently throughout the game. The first three options —Income, Expenditure, and Maintenance—should be plotted together and compared. The ideal situation shows a steady or rising Income line. Expenditure and Maintenance also shows a rise due to constant expansion, restating and ongoing expenses of the operation. However, these lines should always be lower than the Income line.

The quickest way to check the overall situation is to look at the Balance graph. If your balance is consistently positive and shows a level or rising line across the graph, you're probably doing things right.

(For more details on finances and the handling of money in the game, see Chapter 5, "Finance.")

Returning to the Geoscape

To exit from the Graphs section and return to the Geoscape, click the Geoscape icon on the far right side of the Graph options.

UFOPEDIA

Clicking the UFOpedia button brings up the main menu of the UFOpedia, an on-line reference guide to all X-COM and alien technology. It provides pictures and descriptions of every technology and bit of alien lore known to X-COM (see Figure 2-21).

For the sake of convenience, the UFOpedia is organized into nine separate categories, each covering a specific type of information:

- **X-COM Craft and Armament:** Statistics on the air- and spacecraft that can be built by X-COM and the armaments and ammunition with which they can be armed
- **Heavy Weapons Platforms:** Statistics on all tanks and hovertanks that can be purchased or manufactured
- **Weapons and Equipment:** Statistics on all equipment items, weapons, and ammunition based on Terrain technology that can be purchased or manufactured
- **Alien Artifacts:** Statistics on all equipment, weapons, and ammunition based on alien technology that have been recovered and researched
- **Base Facilities:** Statistics on all base structures that can be built
- **Alien Life Forms:** Information on all captured alien life forms that have been studied or autopsied
- **Alien Research:** Information on alien operations gathered through the interrogation of live aliens

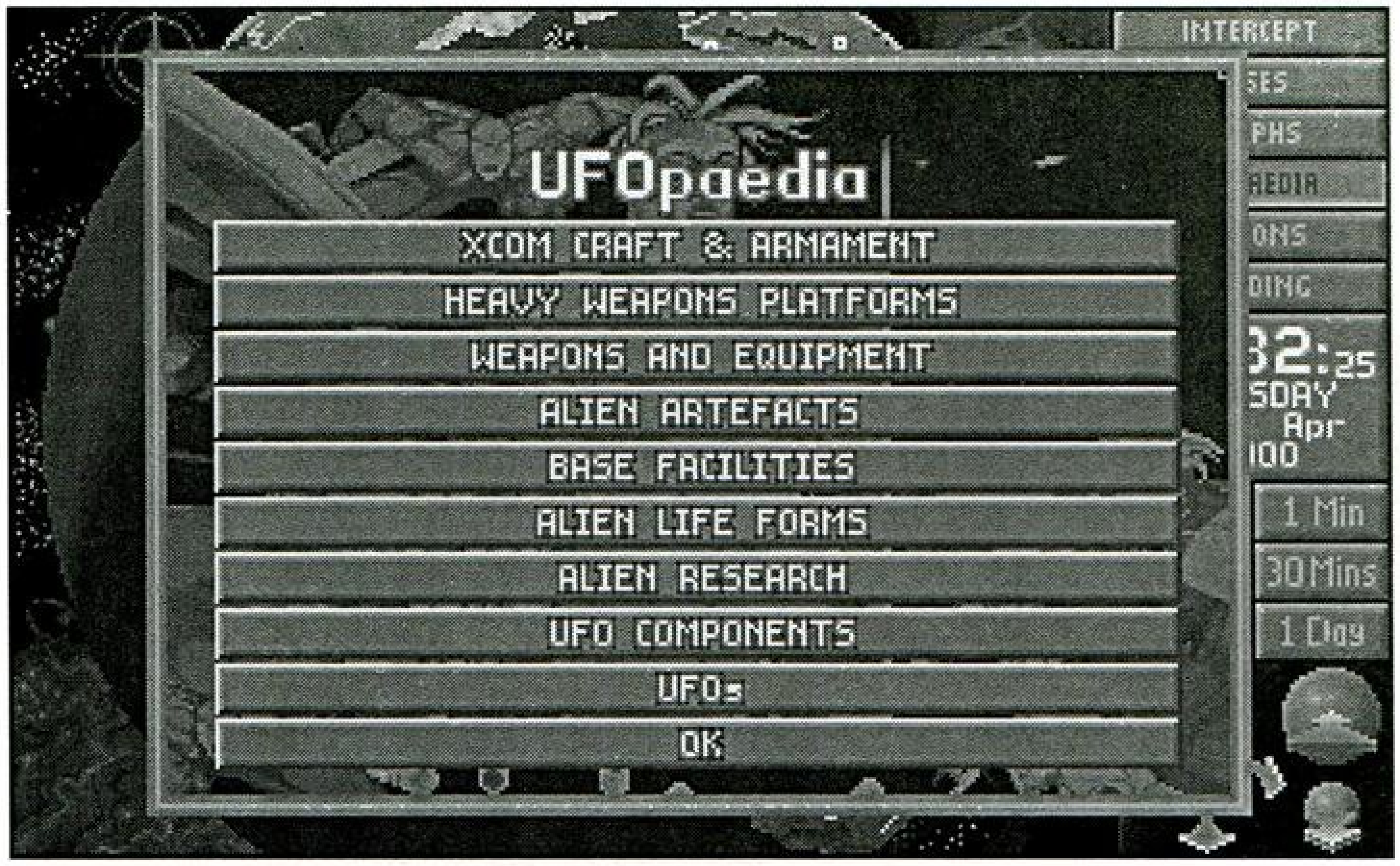
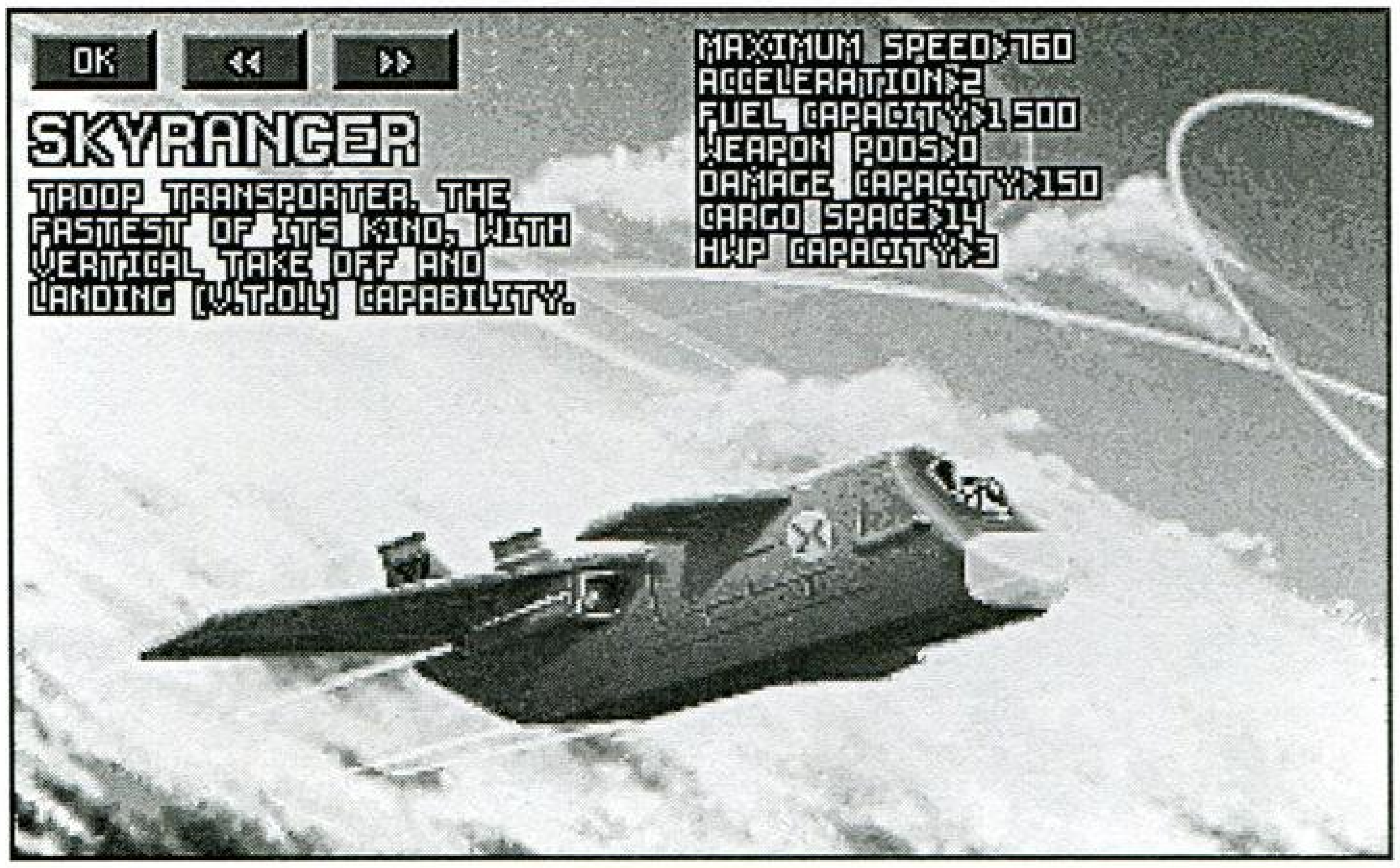

INTERCEPT
UFOpaedia
XCOM CRAFT & ARMAMENT
HEAVY WEAPONS PLATFORMS
WEAPONS AND EQUIPMENT
ALIEN ARTEFACTS
BASE FACILITIES
ALIEN LIFE FORMS
ALIEN RESEARCH
UFO COMPONENTS
UFOs
OK
1 Min
30 Mins
1 Day

Figure 2-21
The UFOpedia menu.

- **UFO Components:** Information on components of alien vessels
- **UFOs:** Statistics of alien vessels, gathered through the interrogation of alien engineers

To select a topic, click on it. This step brings up the Select Item screen, which lists all known items in that category. Click on the item you want information on to open the UFOpedia Data screen, as shown in Figure 2-22.



SKYRANGER

TROOP TRANSPORTER. THE FASTEST OF ITS KIND, WITH VERTICAL TAKE OFF AND LANDING [V.T.O.L] CAPABILITY.

MAXIMUM SPEED>760
ACCELERATION>2
FUEL CAPACITY>1500
WEAPON PODS>0
DAMAGE CAPACITY>150
CARGO SPACE>14
HWP CAPACITY>3

Figure 2-22
The UFOpedia data screen for the Skyranger.

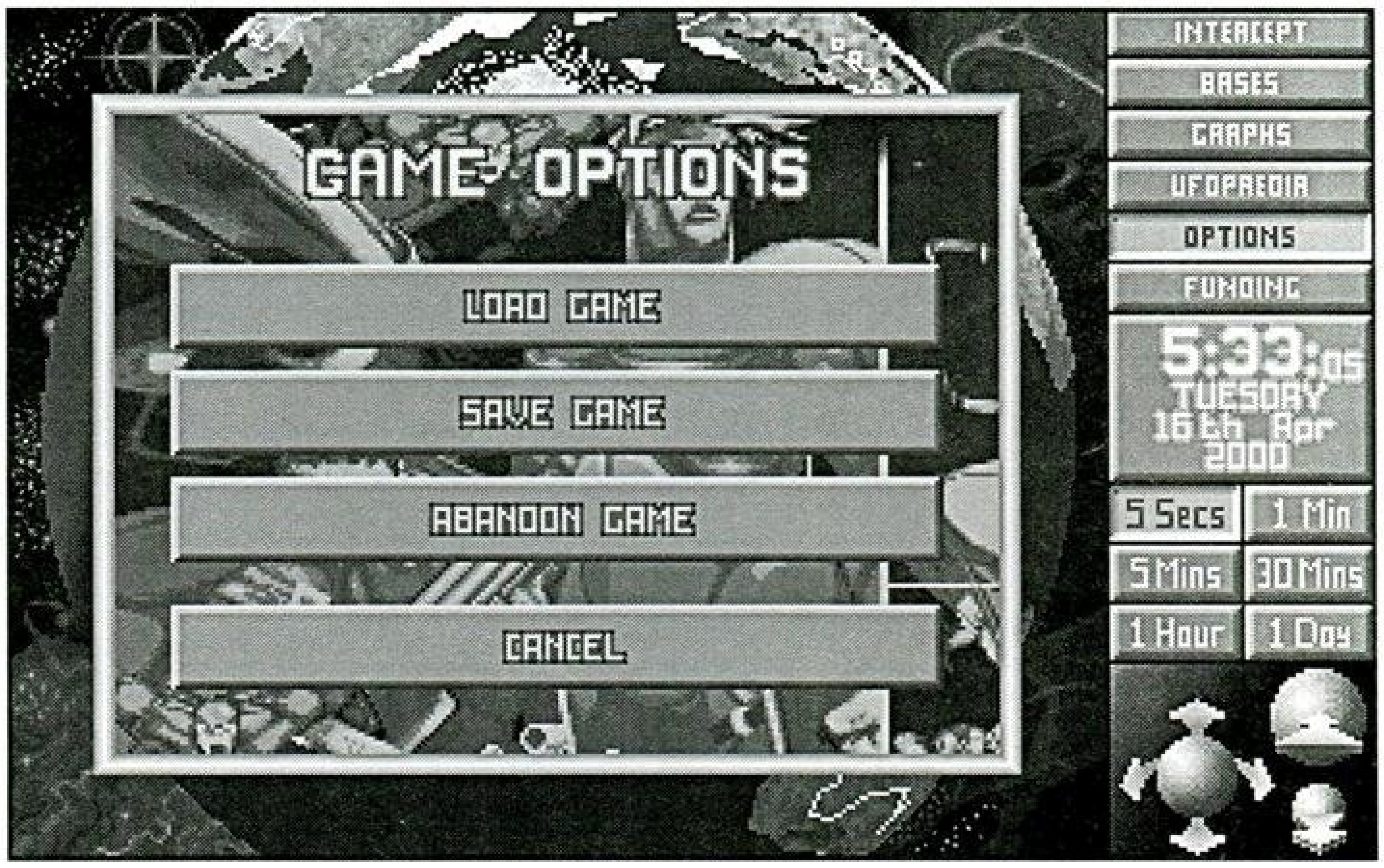

GAME OPTIONS
LOAD GAME
SAVE GAME
ABANDON GAME
CANCEL
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
5:33:05
TUESDAY
16th Apr
2000
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 2-23 The Options window.

The UFOpedia Data screen has three control buttons. By clicking the right-arrow button, you can scroll to the next topic on the list. By clicking the left-arrow button, you can scroll to the preceding topic in the list. In this manner, you can scroll through all available topics in the entire UFOpedia. Clicking the OK button returns you to the Select Item screen.

Only information that is known at the beginning of the game or that has been gained through research at a given point in the game is listed in the UFOpedia. As new topics are researched, they are automatically added to the list.

To exit from any screen in the UFOpedia, click the OK button.

OPTIONS

Clicking Options brings up the Options window (see Figure 2-23).

The Options window allows the following actions:

- **Load Game:** Lets you load a previously saved game
- **Save Game:** Lets you save the game currently in progress (you can have a maximum of ten saved games at any one time)
- **Abandon Game:** Lets you quit the game currently in progress (you are given one chance to change your mind)

To exit from any menu in the Options section without performing one of these actions, click the Cancel button.

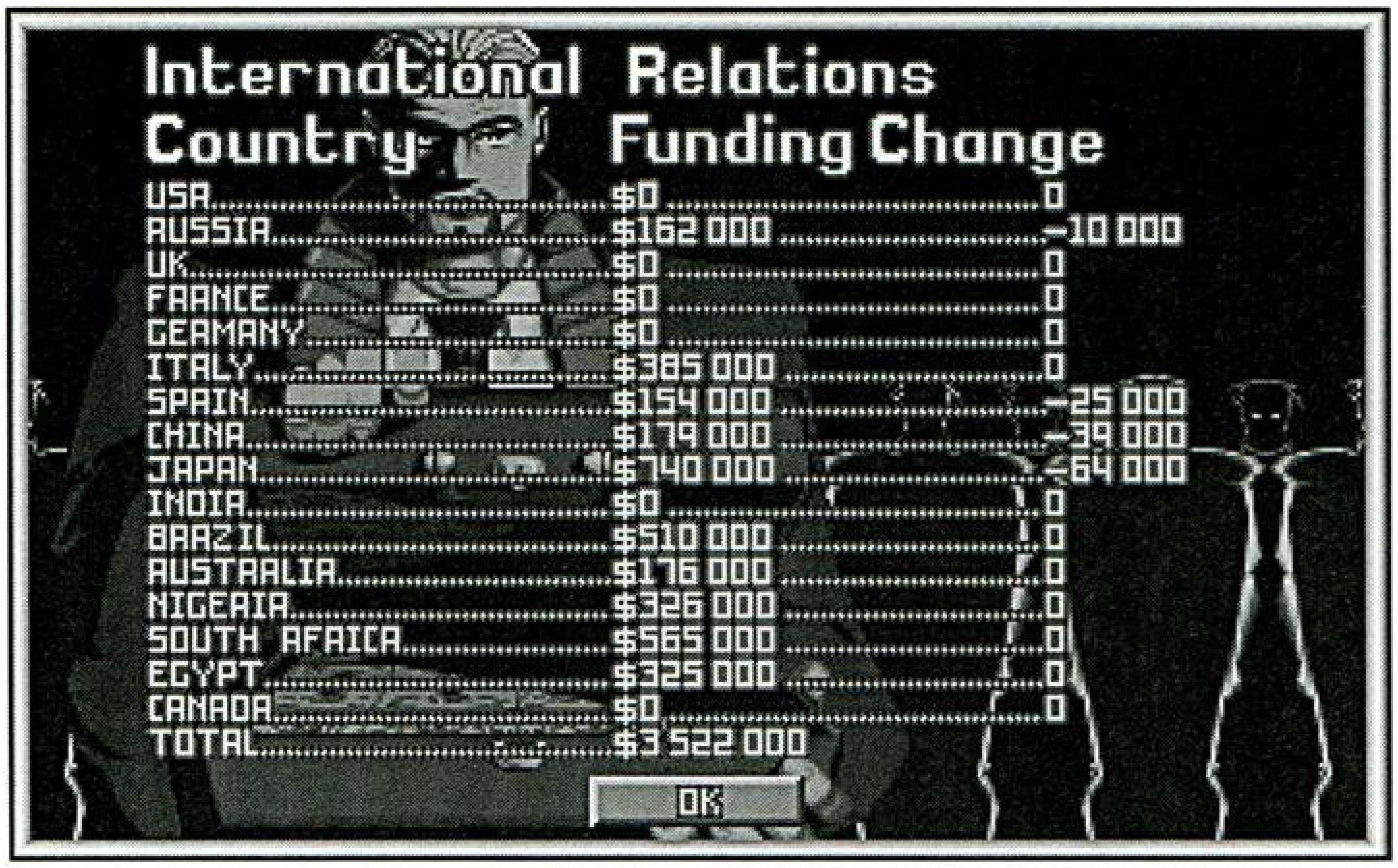
FUNDING

Choosing the Funding option brings up the International Relations window, which displays information about the nations contributing funds to X-COM each month, as shown in Figure 2-24.

The International Relations window displays the following information:

- **Country:** The names of the contributing countries
- **Funding:** The amount of money contributed by the country for the current month
- **Change:** The difference between what was contributed by a country for the current month and what was contributed by that country in the previous month

This screen is an easy way to determine how X-COM performance in each of the contributing countries is being judged. If a positive number is recorded in the change column for a given country, you are doing particularly well in that country. No change in funding for a given country means that you are doing an adequate


International Relations

Country	Funding	Change
USA	$0	0
RUSSIA	$162 000	-10 000
UK	$0	0
FRANCE	$0	0
GERMANY	$0	0
ITALY	$385 000	0
SPAIN	$154 000	-25 000
CHINA	$179 000	-39 000
JAPAN	$740 000	-64 000
INDIA	$0	0
BRAZIL	$510 000	0
AUSTRALIA	$176 000	0
NIGERIA	$326 000	0
SOUTH AFRICA	$565 000	0
EGYPT	$325 000	0
CANADA	$0	0
TOTAL	$3 522 000	

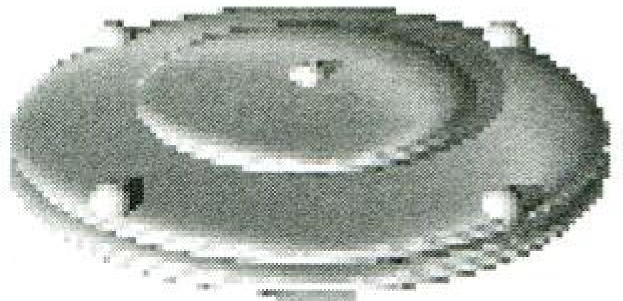
Figure 2-24
The International Relations window.

job. A negative change in contributions from a country shows that you are doing a less-than-perfect job in that country. If you notice a negative change in funding, especially in one of the more wealthy countries, you should do something to rectify the situation as soon as possible.

A FINAL WORD ABOUT THE GEOSCAPE

By now you should have a good idea of how all the controls on the Geoscape function. Throughout this chapter, I've touched on one or two subjects you are probably dying to know more about. One or two actions that take place on the Geoscape, such as air-to-air combat, were not covered here. Never fear! All these subjects are covered a little later.

In the meantime, you have learned about one of the three main places where you spend your time during the game. In the next chapter, we move on to a section in which, like the Geoscape, you manage and control the overall operations of your X-COM activities—the Base Display.



Chapter Three

X-COM Bases

X-COM bases have facilities for tracking and identifying UFOs. They provide living space for soldiers, scientists, and engineers. They contain science labs and equipment for the research of aliens and alien artifacts, and they have sophisticated manufacturing facilities capable of reproducing alien technology that has been researched by your scientists. They also have storage facilities for artifacts and aliens collected by X-COM operatives. And they serve as launching points for expeditions and military strikes.

This chapter is divided into two sections: The first section describes the layout and functions of the Bases screen. The second section concentrates on the strategies involved in the placement and design of X-COM bases.

THE BASES SCREEN

Like the Geoscape screen, the Bases screen has many controls that allow you to control the overall operation of X-COM forces

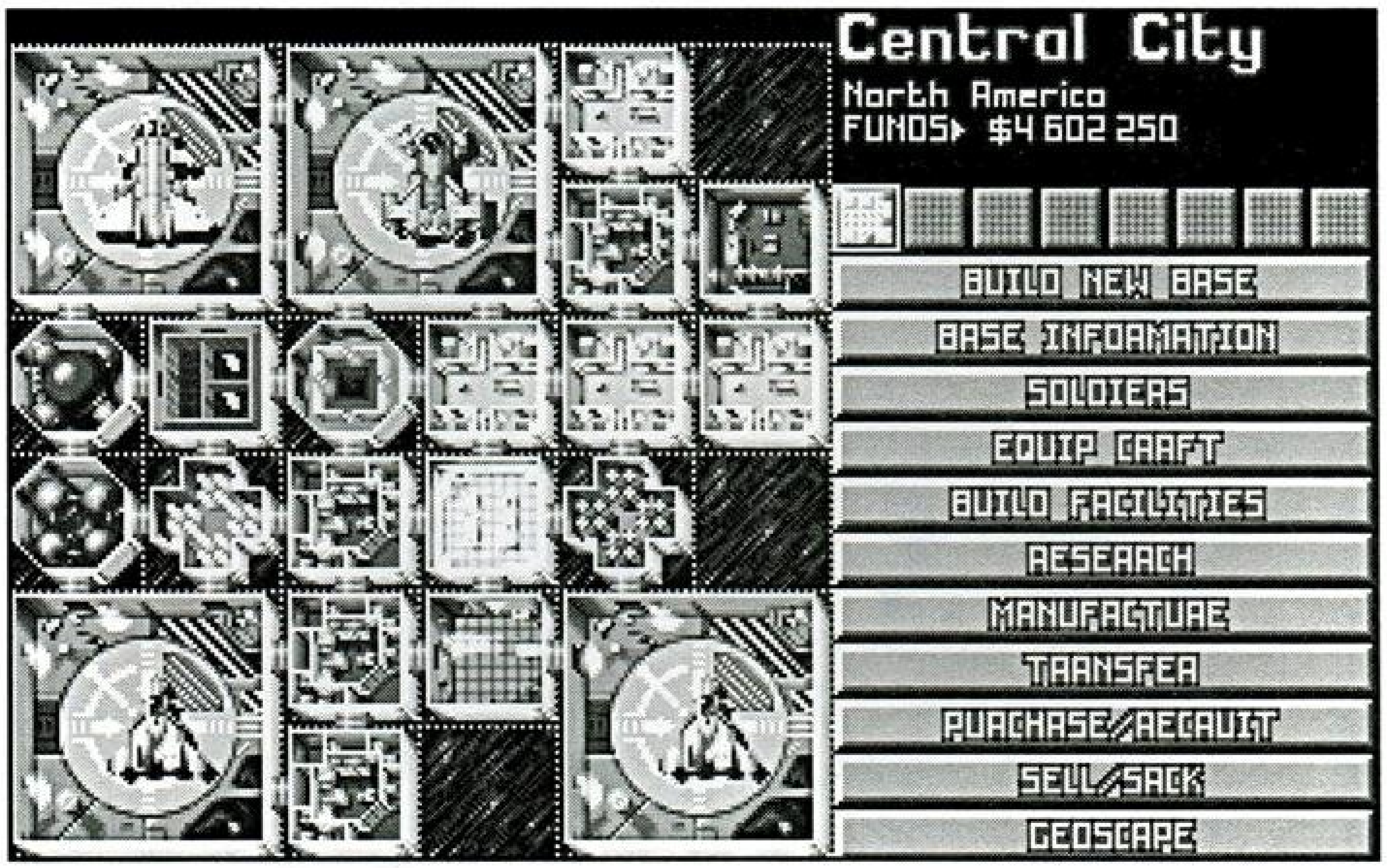

Central City
North America
FUNDS▸ $4 602 250
BUILD NEW BASE
BASE INFORMATION
SOLDIERS
EQUIP CRAFT
BUILD FACILITIES
RESEARCH
MANUFACTURE
TRANSFER
PURCHASE/RECRUIT
SELL/SACK
GEOSCAPE

Figure 3-1
The Bases screen.

and manage the resources at your disposal that keep the operation running efficiently.

To access the Bases screen, click the Bases button on the Geoscape menu. The Base Display is shown in Figure 3-1.

The Bases screen consists of four parts:

- **The Base Display:** The large window on the left that shows a 3-D, overhead view of the base
- **The Information Box:** The box in the upper right part of the screen
- **The Active Base Indicator:** The row of eight squares just below the Information Box
- **The Base Menu Options:** The 11 option buttons located below the Active Base Indicator

THE BASE DISPLAY, INFORMATION BOX, AND ACTIVE BASE INDICATOR

The operation of these three sections of the Bases screen are intermingled, so I'll cover them together (see Figure 3-2).

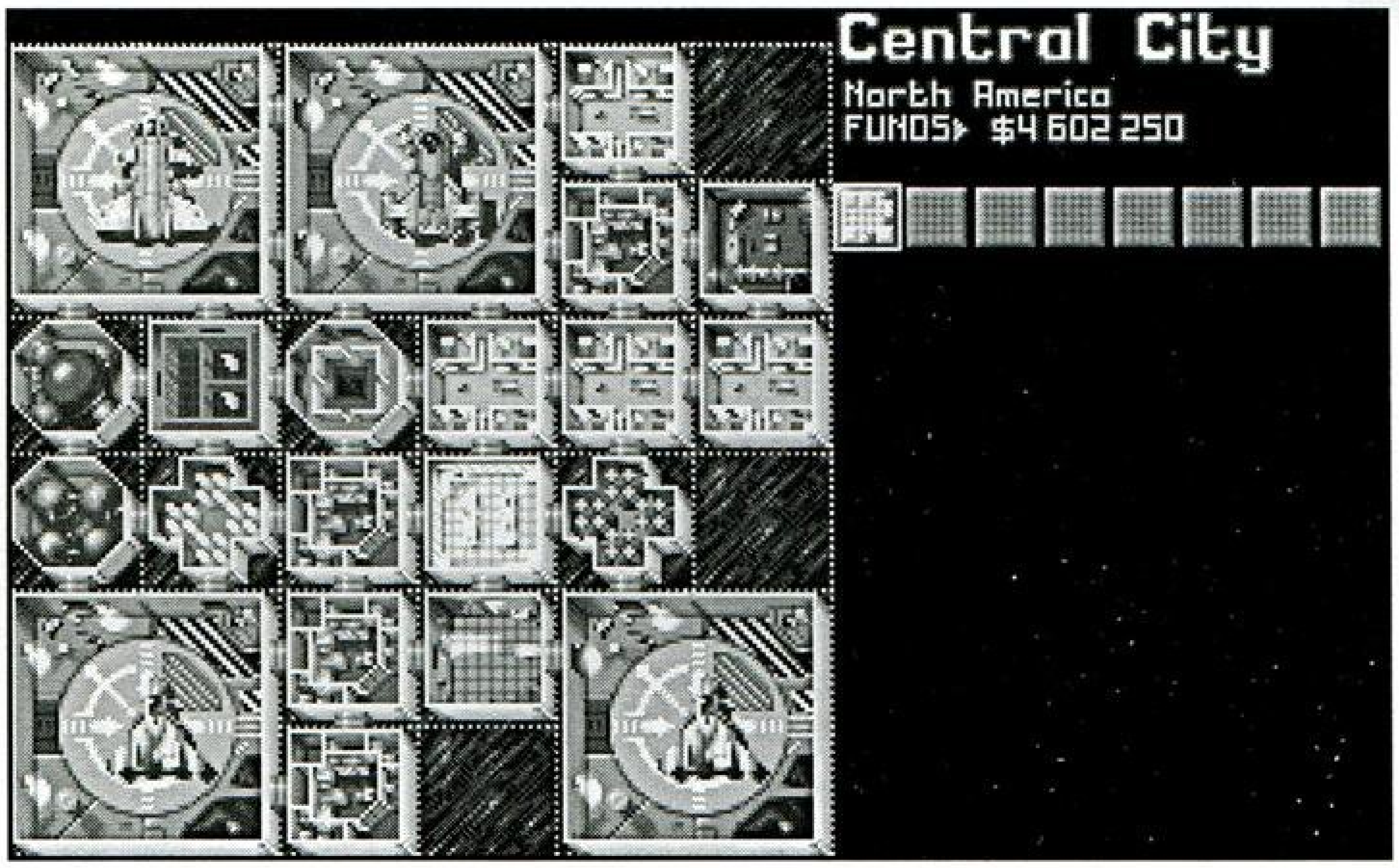


Figure 3-2. The Base Display, Information Box, and Active Base Indicator.

The Base Display shows a top-down, cutaway view of your base. The name and geographic location of the base shown here appears in the Information Box.

The squares in the Active Base Indicator are miniature representations of X-COM bases. You can operate a maximum of eight bases at a time. Operational base facilities are represented here as green squares. Red squares represent facilities currently under construction. To view another base, click one of the squares on the Active Base Indicator. The base you click appears in the Base Display, and its name and location are shown in the Information Box.

In the 3-D view provided by the Base Display, you can see the size and layout of the base as well as add and remove base structures. To find out what a structure is, move the mouse over the structure in question. The name of the structure appears in the upper left corner of the screen. To remove a structure from the base, click on it and confirm your choice by clicking OK. To cancel the action, click Cancel.

When a new base facility is under construction, the square or squares it will occupy are outlined in red, and a number appears in the center. The number indicates the number of days remaining until construction of the facility is complete.

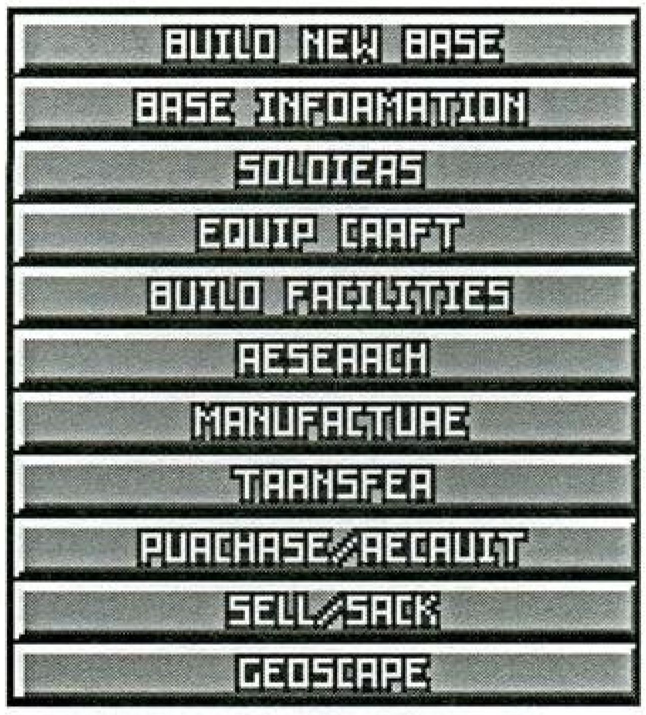

BUILD NEW BASE
BASE INFORMATION
SOLDIERS
EQUIP CRAFT
BUILD FACILITIES
RESEARCH
MANUFACTURE
TRANSFER
PURCHASE/RECRUIT
SELL/SACK
GEOSCAPE

Figure 3-3
The Base menu options.

Except for the first time you go to the Bases screen in a game, the display always defaults to the last base you viewed before exiting from the screen.

THE BASE MENU OPTIONS

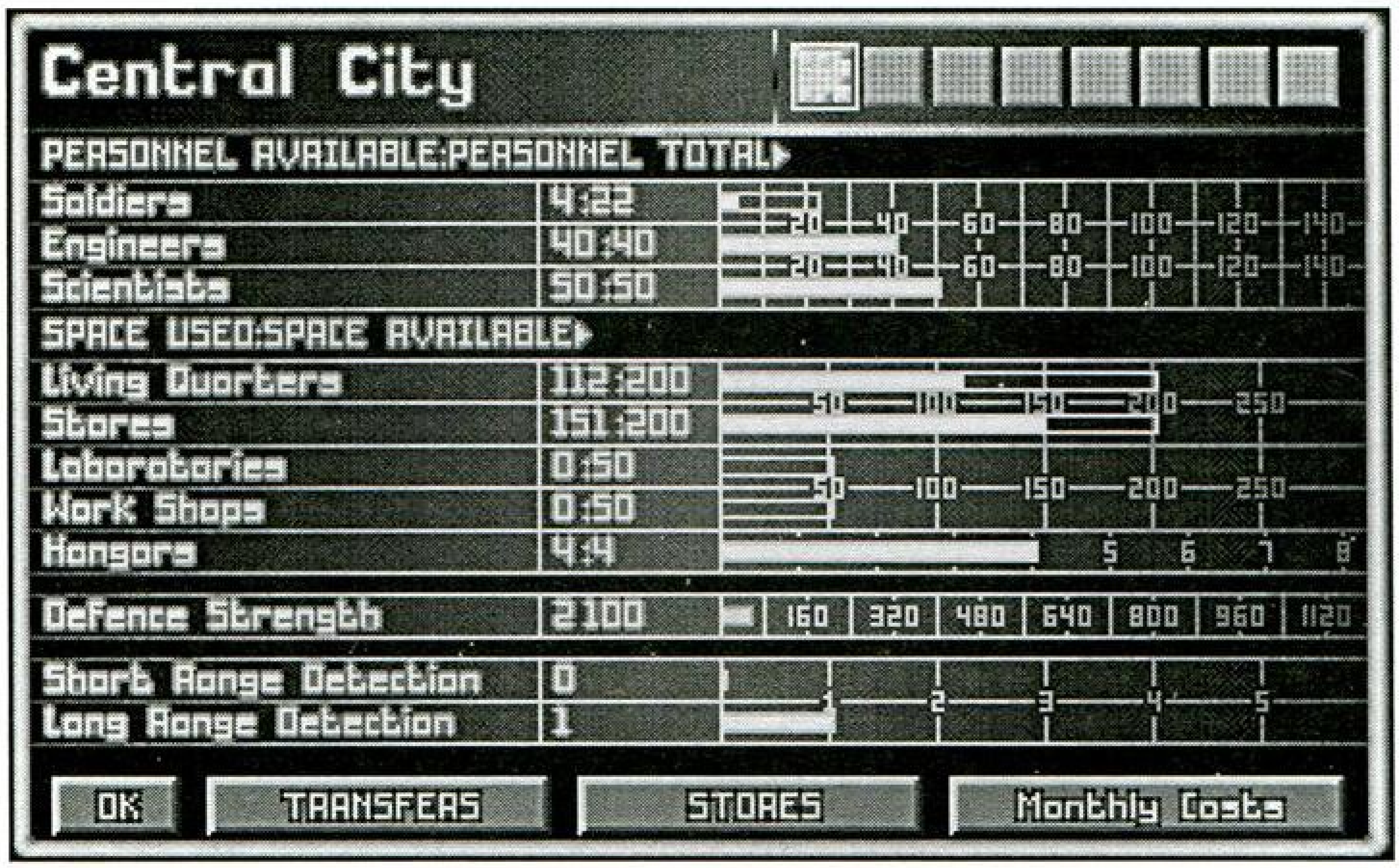
The Base menu options allow you to control all aspects of base, personnel, and material management (see Figure 3-3). The menu options apply only to the base shown in the Base Display. To perform tasks at another base, choose the new base by clicking on its icon in the Active Base Indicator.

Eleven options can be accessed from this menu. Each option is explained in the following sections.

Build New Base

The Build New Base option allows you to build a new X-COM base. When you click this option, you are taken to a view of the Geoscape screen and prompted to select the site of the new base, just as you are at the beginning of the game. The details and strategy of choosing base locations are in the second half of this chapter.

After you have chosen the base location, you are informed of the price of establishing a new base and given the opportunity to cancel the action. To cancel, click the Cancel button; otherwise, click the OK button to build the base. You are then prompted to name the new base.



Central City

PERSONNEL AVAILABLE:PERSONNEL TOTAL

Soldiers 4:22

Engineers 40:40

Scientists 50:50

SPACE USED:SPACE AVAILABLE

Living Quarters 112:200

Stores 151:200

Laboratories 0:50

Work Shops 0:50

Hangars 4:4

Defence Strength 2100

Short Range Detection 0

Long Range Detection 1

Figure 3-4
The Base Information screen.

After naming the base, you are returned to the Bases screen and prompted to select a location for the new base's access lift. As explained later in this chapter, every base must have an access lift, and it is always the first structure built. The access lift takes one day to build. After it is completed, you are free to add other structures to the new base.

The cost of establishing a new X-COM base varies depending on the area of the world in which you chose to build. Building costs for bases and facilities are covered in the second half of this chapter, in the section "Base Location and Design."

Base Information

The Base Information option gives you access to a complete breakdown of data concerning a base (see Figure 3-4). This screen shows a breakdown of the statistics and resources for the chosen base. A duplicate of the Active Base Indicator is located in the top right corner of the screen, and you can get information about other bases by clicking them.

The Base Information screen data is broken down into the following areas:

- **Personnel Available/Personnel Total:** This section divides base personnel into their three component groups (soldiers, scientists, and engineers). Each group has two numbers to the right, divided by a colon. The number on the left of the colon shows the number of each group who are currently not occupied with any task; the number on the right is the total number of that type of personnel stationed at the base. In an efficiently run base, the left number is almost always zero (0), indicating that all personnel of that type are performing some useful task.

  The bar graphs to the right of each type of personnel show the same data at a glance. An empty bar indicates that all personnel available in that category are being utilized. A solid bar indicates that all personnel are available for work and not currently being utilized.

- **Space Used/Space Available:** This section shows how efficiently the base's living quarters, general stores, laboratories, work shops, and hangars are being utilized. It uses the same notation as the Personnel Available/Personnel Total section: The number to the left of the colon shows the amount of space used in each type of facility; the number on the right shows the total space available for use at the base. In an efficient base, the left and right numbers should be very close, if not equal to, one another. This shows that all available space is being utilized.

  The bar graph to the right of each facility presents the same data at a glance. These are the exact opposite of the personnel graphs: An empty bar shows that a facility is standing unused, and a solid bar indicates that the facility is being utilized to its capacity.

- **Defense Strength:** This number rates how well the base can defend itself from attack. The higher the number, the better the defenses.

- **Short Range Detection:** The number of short-range radar systems installed in the base.

- **Long Range Detection:** The number of long-range radar systems and Hyper-wave Decoders installed in the base.

The bar graph data for Defense Strength, Short Range Detection, and Long Range Detection simply indicates the number of such facilities in place and does not reflect their amount of usage.

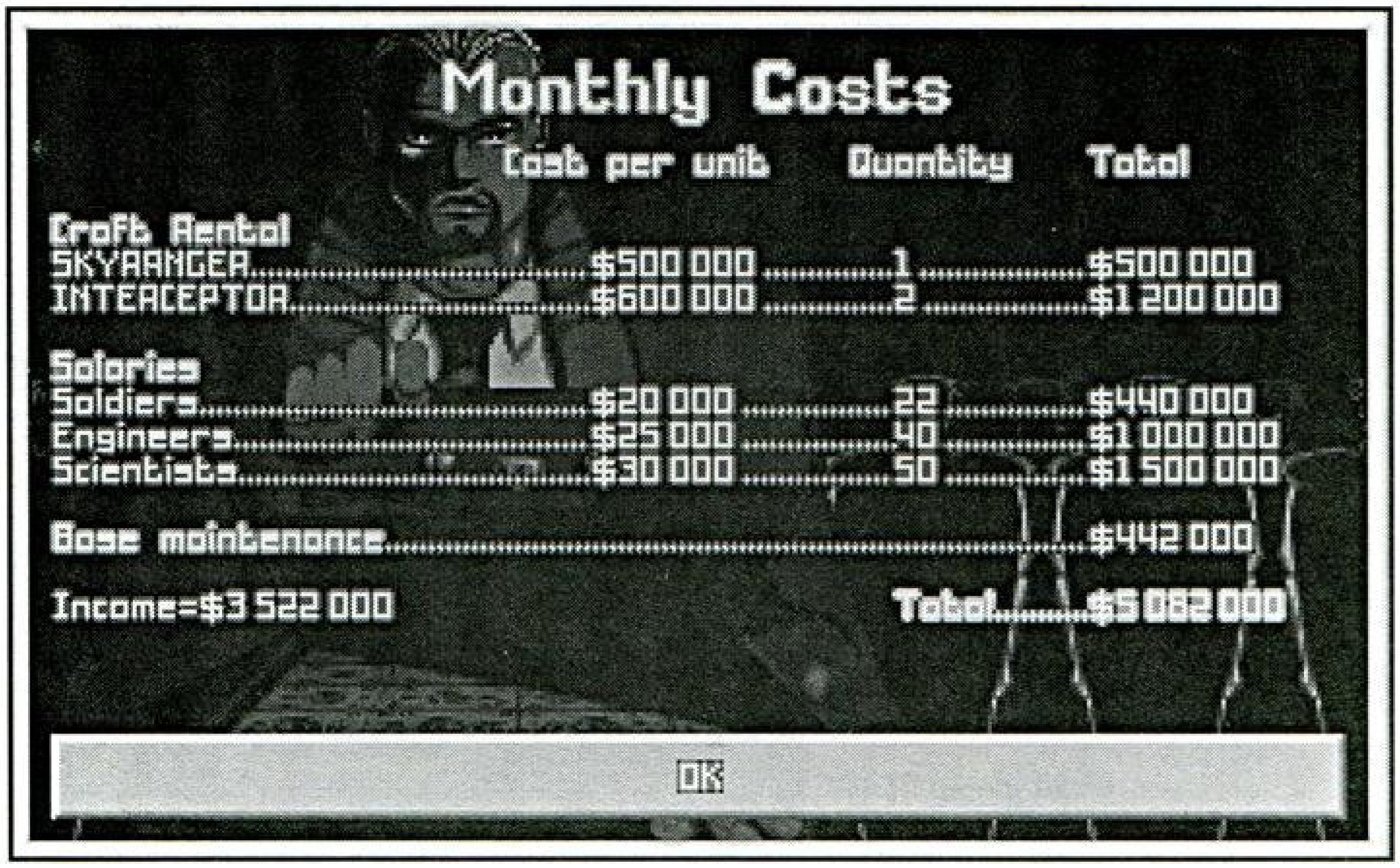
Base Information Screen Options

Four options are available from the Base Information screen:

- **OK:** Returns you to the Bases screen
- **Transfers:** Displays a list of items currently in transit to the chosen base. This list includes items that have been purchased in addition to items that have been transferred from other X-COM bases. It shows the name of the item in transit, the quantity, and the estimated arrival time (in hours).
- **Stores**: Displays a complete list of the items stored at the selected base
- **Monthly Costs:** Displays a breakdown of the monthly operational cost of the chosen base, broken into separate categories of craft rental, salaries, and base maintenance. The Monthly Costs report is shown in Figure 3-5.

Soldiers

Clicking the Soldiers option displays the Soldier List, a roster of all soldiers stationed at the selected base . Each soldier's name, rank,



Monthly Costs

	Cost per unit	Quantity	Total
Craft Rental			
SKYRANGER	$500 000	1	$500 000
INTERCEPTOR	$600 000	2	$1 200 000
Salaries			
Soldiers	$20 000	22	$440 000
Engineers	$25 000	40	$1 000 000
Scientists	$30 000	50	$1 500 000
Base maintenance			$442 000
Income=$3 522 000		Total	$5 082 000

Figure 3-5
Monthly Cost breakdown for an X-COM base.

and assigned transport craft are listed. If a soldier is recovering from wounds received in battle, Wounded appears in the Craft column. If a soldier is not assigned to a craft, the Craft column for that soldier shows None.

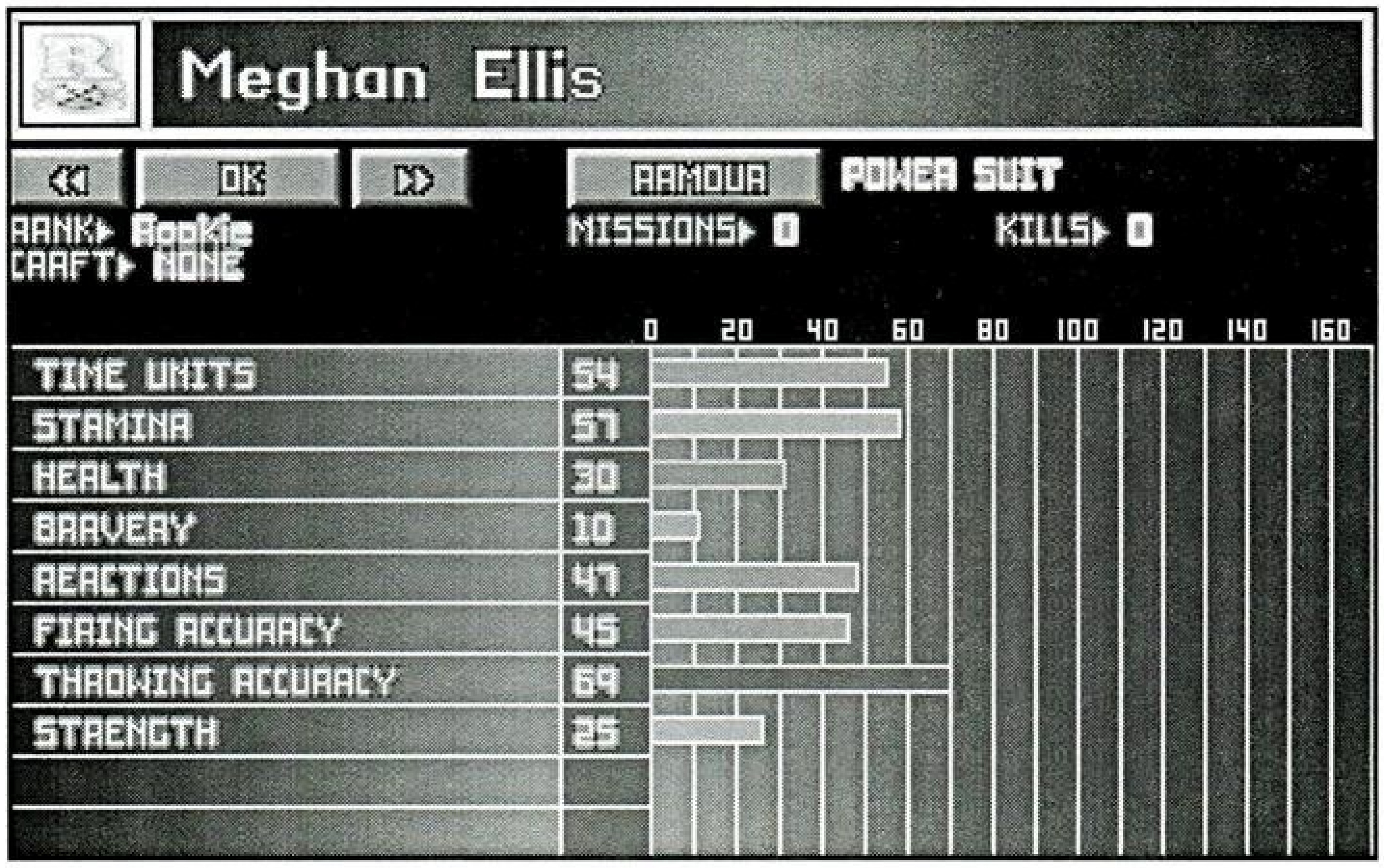
More detailed information on each soldier can be obtained by clicking on the soldier's name. This step brings up a data screen for that soldier, as shown in Figure 3-6.

This data screen shows the soldier's rank insignia and name at the top of the screen. Listed below it are the soldier's rank, assigned craft, type of armor worn, number of missions, and number of alien kills. The bottom section of the screen shows all the soldier's vital statistics. (For more information on soldier statistics, see Chapter 8, "Soldiers, Movement, and Combat.")

Several control buttons are also on this screen. The arrow buttons allow you to scroll back and forth through data screens for all the soldiers stationed at the chosen base. The Armor button brings up a list of all available armor at the base, allowing you to equip the soldier with armor.

All soldiers are given a name by the computer. However, you may change the names of your soldiers from this data screen. To do so, click on the name box at the top of the screen. When the cursor appears, backspace over the computer name and simply type the name of your choice.

To return to the Soldier List, click the OK button.



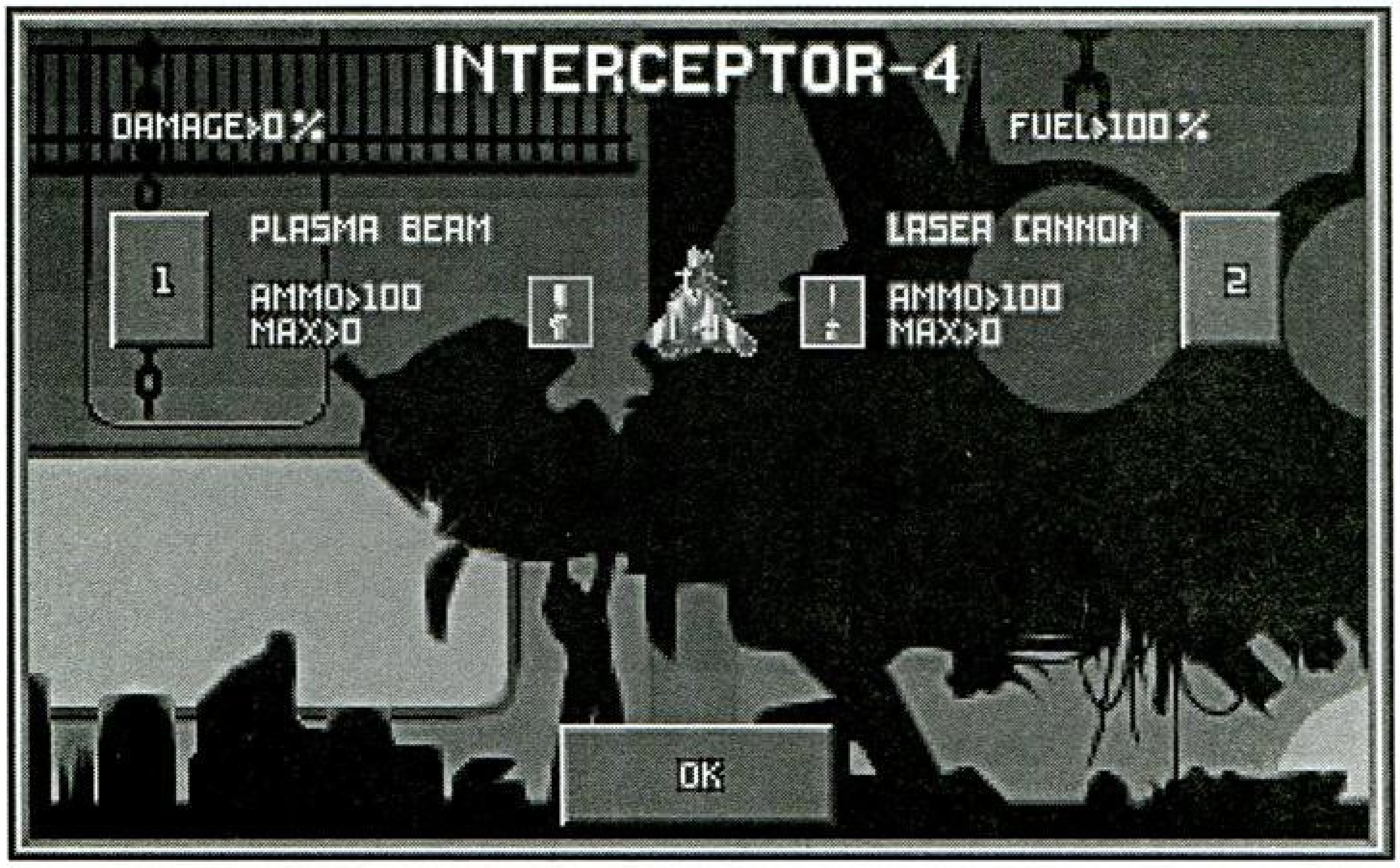
Meghan Ellis

POWER SUIT

RANK▸ Rookie
CRAFT▸ NONE
MISSIONS▸ 0
KILLS▸ 0

TIME UNITS	54
STAMINA	57
HEALTH	30
BRAVERY	10
REACTIONS	47
FIRING ACCURACY	45
THROWING ACCURACY	69
STRENGTH	25

Figure 3-6
Data screen for an X-COM soldier.



INTERCEPTOR-4

DAMAGE>0 %

FUEL>100 %

PLASMA BEAM
AMMO>100
MAX>0

LASER CANNON
AMMO>100
MAX>0

Figure 3-7
The Interception Craft screen.

Equip Craft

The Interception Craft screen lists all the interceptor and transport craft stationed at the chosen base (see Figure 3-7). The following information is listed for each craft:

- **Name:** The name and numeric designation of the craft (Interceptor-7, for example)
- **Status:** The craft's status as listed here:

  Ready: The craft is available and ready to launch.

  Refueling: The craft is refueling and cannot launch.

  Rearming: The craft is reloading its weapon systems and cannot launch.

  Repairs: The craft is being repaired and cannot launch.

  Out: The craft is away from the base on an assigned mission.
- **Weapon Systems:** The air-to-air weaponry installed on the craft, shown as the number of weapons installed and the maximum number of weapons for the craft (for example, 1/2 indicates a craft that can have a maximum of two weapons installed but is carrying only one)
- **Crew:** The number of soldiers currently stationed aboard the craft
- **HWPs:** The number of heavy-weapons platforms (tanks and hover-tanks) stationed aboard the craft

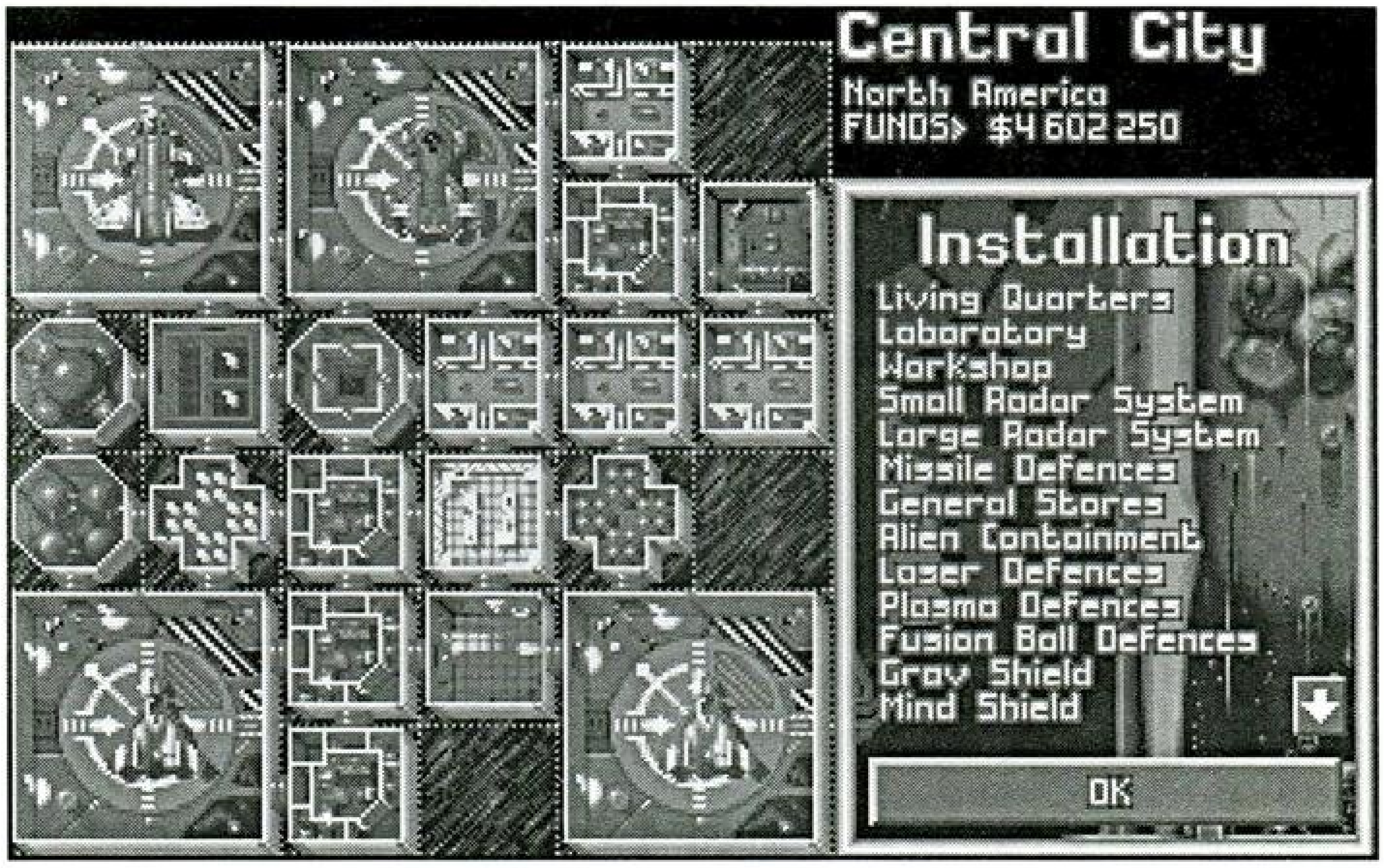

Central City
North America
FUNDS> $4 602 250
Installation
Living Quarters
Laboratory
Workshop
Small Radar System
Large Radar System
Missile Defences
General Stores
Alien Containment
Laser Defences
Plasma Defences
Fusion Ball Defences
Grav Shield
Mind Shield
OK

Figure 3-8
The Select Installation window.

To equip a craft, select one from the list by clicking on it. (For details on equipping craft, see Chapter 7, "Intercepting UFOs", and Chapter 10, "Ground Assaults.")

Build Facilities

The Build Facilities option allows you to add new structures to the chosen base. When you click on the Build Facilities button, the Base menu options are replaced with the Select Installation window, as shown in Figure 3-8.

The Select Installation window displays all the structures currently available for you to build. As the game progresses and you continue to research aliens and their technologies, more base structures are added to the list. Details about all base structures available in the game are listed in the second half of this chapter.

To select a structure to build, click the name of the structure. A secondary window appears, telling you how much it costs to build the structure, the monthly maintenance cost, and how long it takes to complete. Click Cancel if you change your mind. To begin construction on the new facility, move the mouse cursor to the square in the Base Display where you want the new facility built and then click. **Note:** the new structure must be built adjacent to a completed base facility.

To exit from the Select Installation window without building a new facility, click the Cancel button.

Research

This option is one of the most important in the game. The Research button allows you to assign scientists to research advanced alien and Terran technologies. In most cases, after these technologies have been successfully researched, your engineers can use the information to successfully reproduce the technology. Craft and weapons based on alien technology are among the most powerful tools in the game.

For complete information on the methods and strategies involved in research projects, refer to Chapter 6, "Research and Manufacturing."

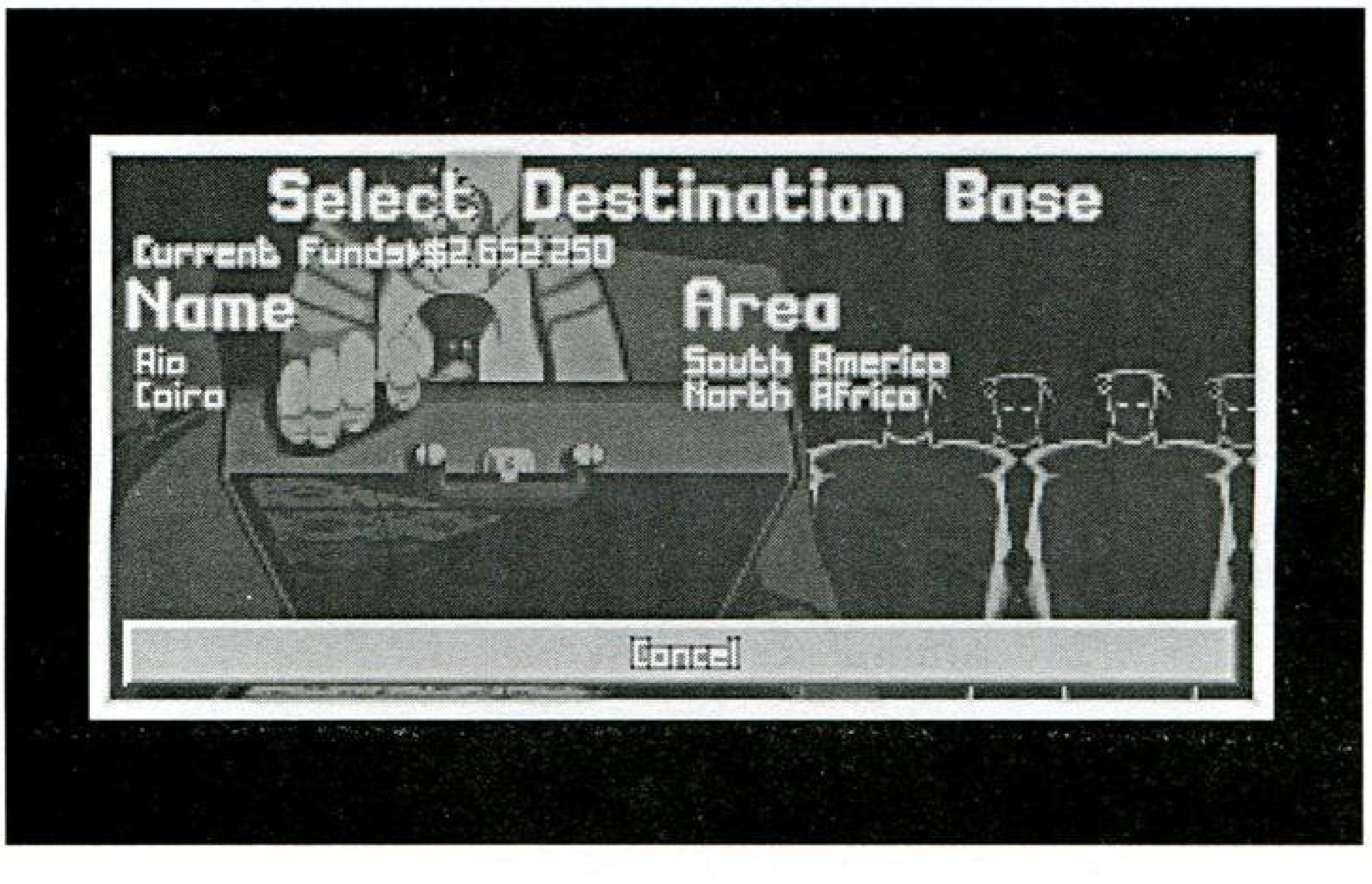
Manufacture

The Manufacture option allows you to assign engineers to build new equipment and craft based on the results of completed research.

For complete information on the manufacture of items, refer to Chapter 6, "Research and Manufacturing."

Transfer

The Transfer option allows you to transfer items from the selected base to any other X-COM base in the world. Clicking this option brings up the Select Destination Base screen, shown in Figure 3-9.

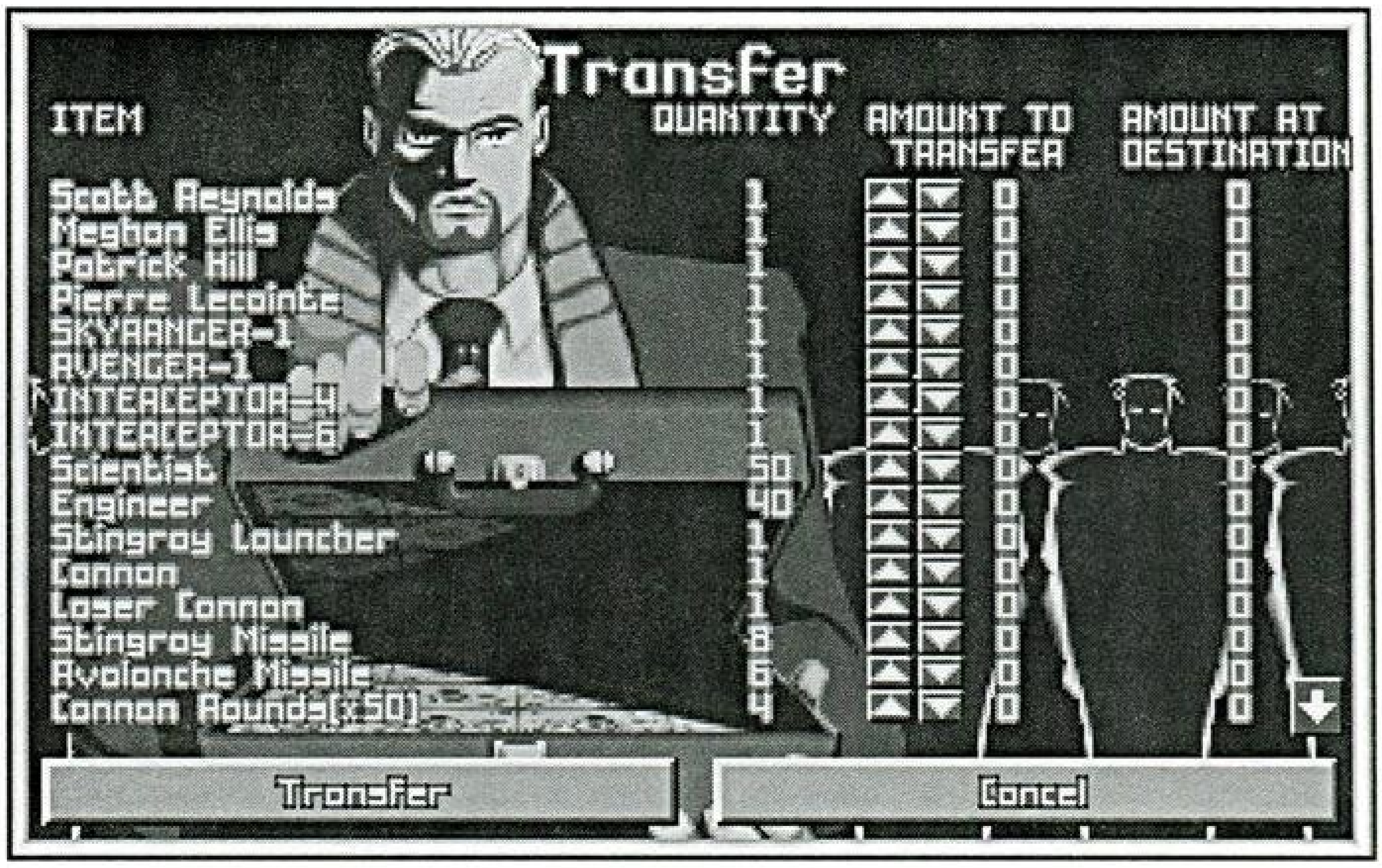


Select Destination Base

Current Funds>$2.652.250

Name	Area
Rio	South America
Cairo	North Africa

Figure 3-9
The Select Destination Screen.



ITEM	QUANTITY	AMOUNT TO TRANSFER	AMOUNT AT DESTINATION
Scott Reynolds	1	0	0
Meghan Ellis	1	0	0
Patrick Hill	1	0	0
Pierre Lecointe	1	0	0
SKYRANGER-1	1	0	0
AVENGER-1	1	0	0
INTERCEPTOR-4	1	0	0
INTERCEPTOR-6	1	0	0
Scientist	50	0	0
Engineer	40	0	0
Stingray Launcher	1	0	0
Cannon	1	0	0
Laser Cannon	1	0	0
Stingray Missile	8	0	0
Avalanche Missile	6	0	0
Cannon Rounds(x50)	4	0	0

Figure 3-10
The Transfer screen.

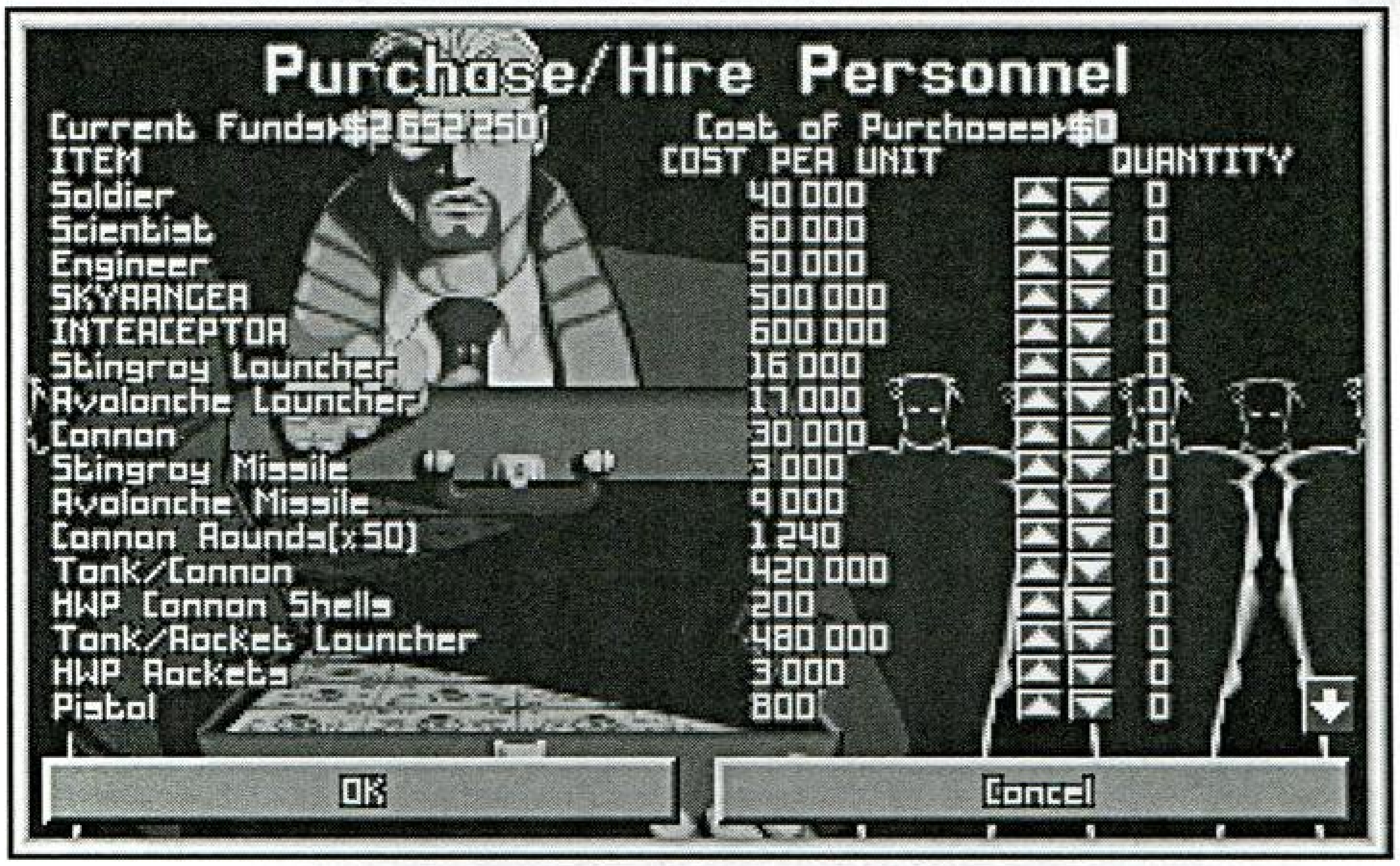
This screen shows your current funds at the top and, at the bottom, a list of all the bases to which you can transfer items. Choose the base you want to transfer items to by clicking on it.

When you choose a base, the Transfer screen appears (see Figure 3-10).

This screen lists all the soldiers, scientists, engineers, equipment, and craft at the chosen base and the quantity of each. On the right side of the screen is the Amount to Transfer column. To increase the number of units of a given item to transfer, click the up arrow on that item's row. To decrease the number, click the down arrow. When all items have been chosen, click the Transfer button. A final window appears, showing the destination for the transfer and the cost to transfer the chosen items. Confirm the transfer by clicking OK, or cancel it by clicking Cancel.

Purchase/Recruit

The Purchase/Recruit option allows you to recruit new soldiers, scientists, and engineers and to purchase new equipment for the chosen base. Clicking this option brings up the Purchase/Hire Personnel screen (see Figure 3-11).



Current Funds>$2 652 250 Cost of Purchases>$0

ITEM	COST PER UNIT	QUANTITY
Soldier	40 000	0
Scientist	60 000	0
Engineer	50 000	0
SKYRANGER	500 000	0
INTERCEPTOR	600 000	0
Stingray Launcher	16 000	0
Avalanche Launcher	17 000	0
Cannon	30 000	0
Stingray Missile	3 000	0
Avalanche Missile	9 000	0
Cannon Rounds(x50)	1 240	0
Tank/Cannon	420 000	0
HWP Cannon Shells	200	0
Tank/Rocket Launcher	480 000	0
HWP Rockets	3 000	0
Pistol	800	0

Figure 3-11
The Purchase/Hire Personnel screen.

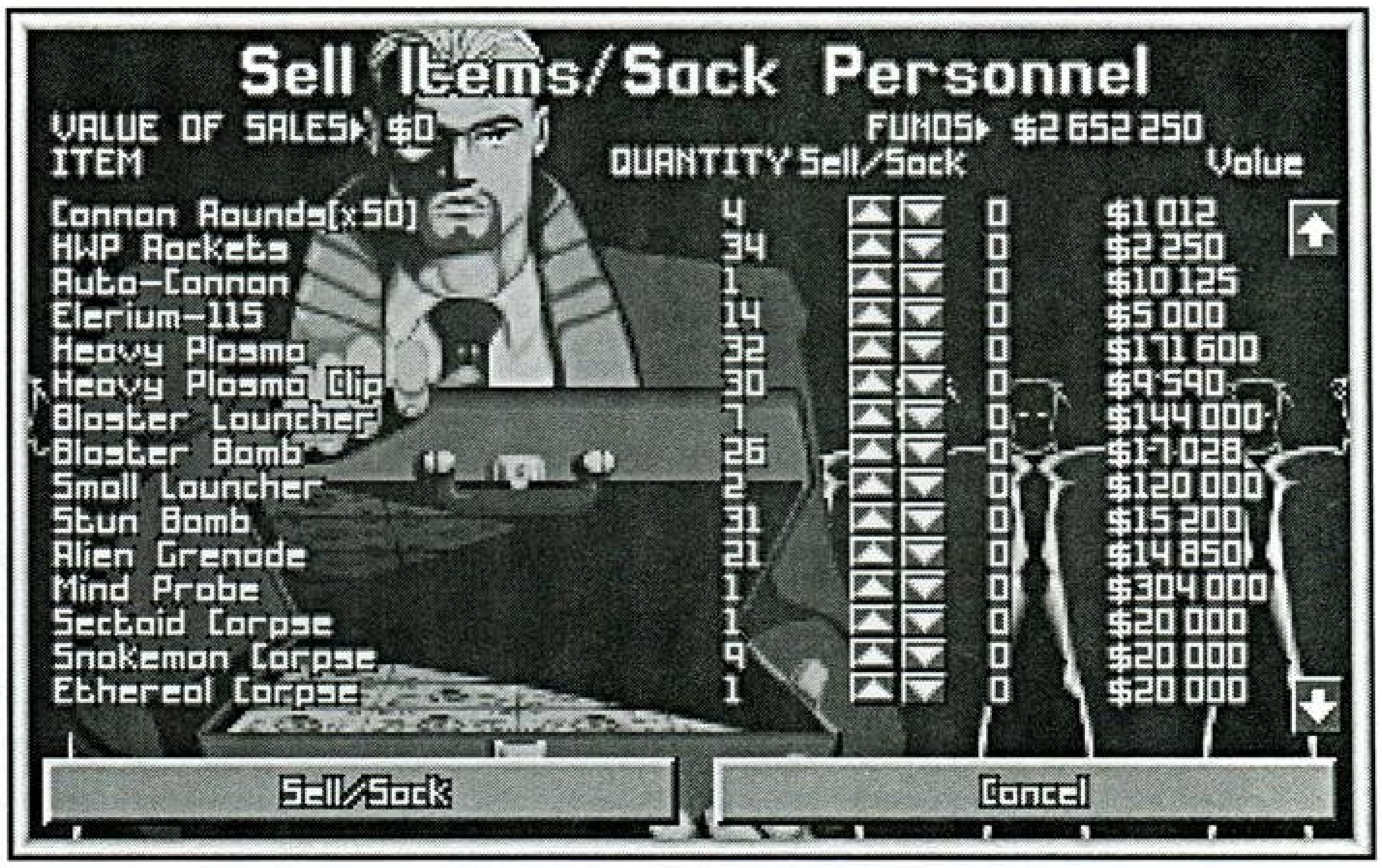
Two dollar amounts are displayed at the top of the screen: your current funds and the cost of your purchase. As you add items and personnel to your "shopping list," the total purchase price is conveniently totaled for you.

Listed here are all the items and personnel that can be purchased in the game and their per-unit cost. This list never changes—weapons and equipment researched throughout the course of the game must be produced by your engineers and cannot be purchased by using the Purchase/Recruit option.

To purchase an item, click the up arrow on the line listing the item you want. Each time you click the up arrow, the quantity increases by one. To decrease the quantity, click the down arrow. When all selections have been made, click the OK button. This step orders the items and personnel you requested and automatically deducts their cost from your total funds. To exit from the Purchase/Recruit screen without making a purchase, click the Cancel button.

Sell/Sack

This option allows you to sell items and get rid of personnel at the chosen base. When you click on Sell/Sack, the Sell Items/Sack Personnel screen appears (see Figure 3-12).



Sell Items/Sack Personnel

VALUE OF SALES▸ $0

FUNDS▸ $2 652 250

ITEM	QUANTITY	Sell/Sack		Value
Cannon Rounds(x50)	4	▲ ▼	0	$1 012
HWP Rockets	34	▲ ▼	0	$2 250
Auto-Cannon	1	▲ ▼	0	$10 125
Elerium-115	14	▲ ▼	0	$5 000
Heavy Plasma	32	▲ ▼	0	$171 600
Heavy Plasma Clip	30	▲ ▼	0	$9 590
Blaster Launcher	7	▲ ▼	0	$144 000
Blaster Bomb	26	▲ ▼	0	$17 028
Small Launcher	2	▲ ▼	0	$120 000
Stun Bomb	31	▲ ▼	0	$15 200
Alien Grenade	21	▲ ▼	0	$14 850
Mind Probe	1	▲ ▼	0	$304 000
Sectoid Corpse	1	▲ ▼	0	$20 000
Snakeman Corpse	9	▲ ▼	0	$20 000
Ethereal Corpse	1	▲ ▼	0	$20 000

Figure 3-12
The Sell Items/Sack Personnel screen.

This screen is laid out in a manner similar to the layout of the Purchase/Recruit screen. Your total funds are listed in the top right corner, and the value of the items sold is displayed in the top left corner. Below that, all the personnel, equipment, craft, and alien artifacts stored at the chosen base are listed along with the quantity of each.

To sell an item (or sack a member of the X-COM team), click the up arrow on the line listing the item or person. Each time you click the up arrow, the number of items to be sold or sacked increases by one. To decrease the number to be sold or sacked, click the down arrow on the line listing the item or person. The total income generated from the sale of items is automatically computed as you go.

After you have chosen all the items to be sold and all personnel to be sacked, click the Sell/Sack button. To exit from this screen without selling or sacking items, click the Cancel button.

Geoscape

Click this button to exit from the Bases screen and return to the Geoscape.

Now that you know all the basic functions performed from the Bases screen and how they work, let's take a look at where to build your bases and how to build them effectively.

BASE LOCATION AND DESIGN

An important factor in developing a successful game strategy for X-COM: UFO Defense is the placement and design and layout of your bases.

Because your first base is already designed and built for you, it is easy to adopt a lazy attitude toward the design, construction, and expansion of base facilities. The most common practice of new X-COM players is to put their first base on whichever land mass is facing them on the Geoscape screen and simply add facilities as they run out of room for personnel and equipment. This strategy often leads to a series of problems later in the game—problems that become progressively more serious as game time passes.

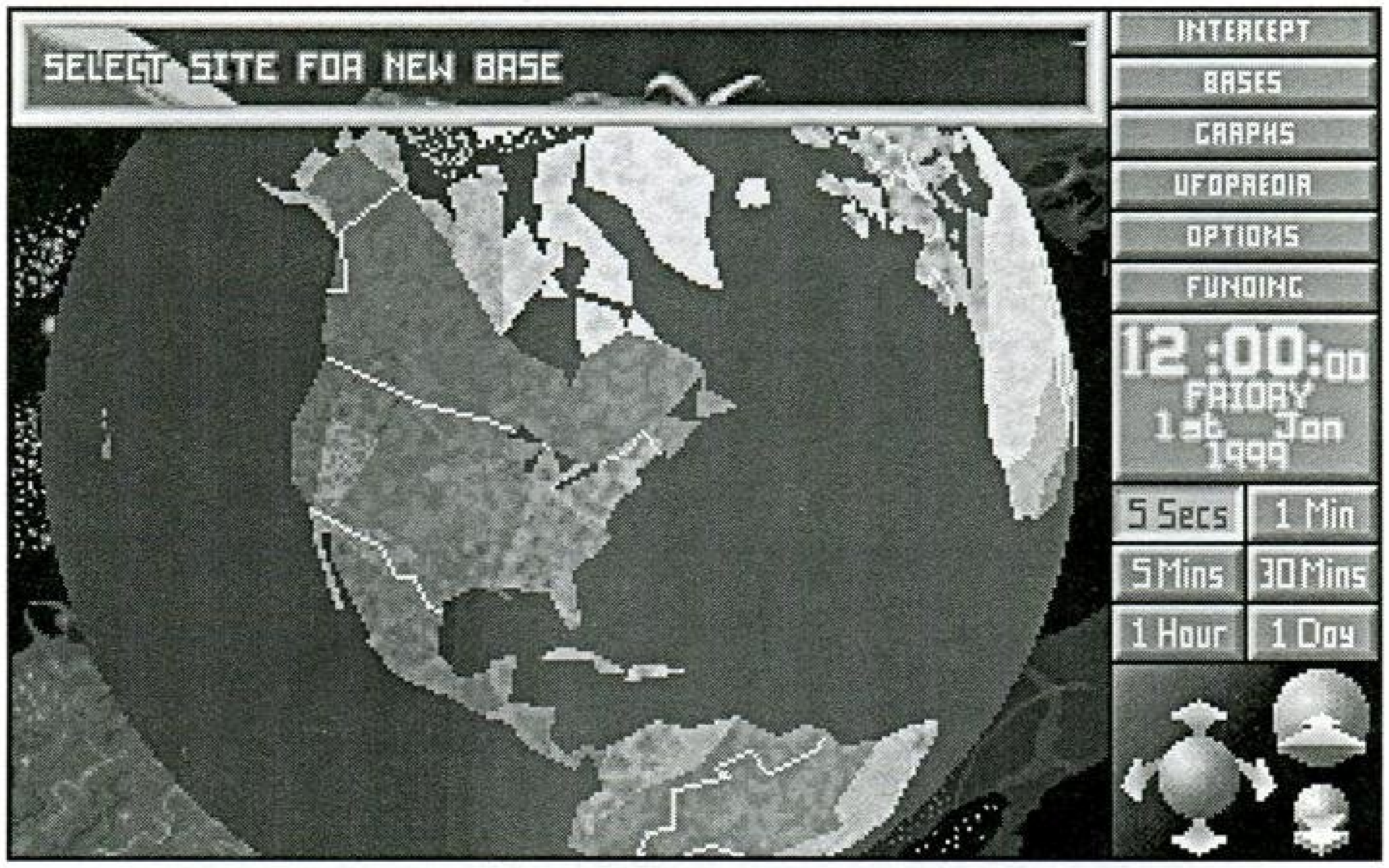
The second half of this chapter explains the strategies for choosing the location of your base and explains the functions of each of the base structures. In addition, you are taught how to construct bases that are effective and easy to defend.

BASE LOCATION

The first choice you face when you begin a new game is the location of your initial X-COM base. When the game begins, the Geoscape screen appears and you are instructed to choose a site, as shown in Figure 3-13.

Choose the location of the base by clicking the spot on the globe where you want to build the base. The globe can be rotated and zoomed in and out by clicking on the Geoscape view controls, as described in Chapter 2, "The Geoscape Screen." These controls are located in the lower right corner of the Geoscape screen. Bases can be placed on any land mass in the world, including continents, islands, and polar ice caps. Bases cannot be built in or on any body of water.

Choosing the location of your first base is important for a number of reasons. First, the base you automatically receive at the beginning of the game is equipped with only a small radar system as detection equipment. This system is capable of tracking UFOs that pass within only 1500 nautical miles. Because most UFO activity takes place around populated areas, it is best to position the base in



SELECT SITE FOR NEW BASE

Figure 3-13
The Geoscape screen, prompting for the position of the first base.

the center of a heavily populated land mass. You can then detect and take action on UFO activity over the broadest possible populated area. Just by counting cities on the Geoscape, you can tell a populated continent like South East Asia from an unpopulated one like Antarctica.

Another factor that should affect your base's location is money. This doesn't mean the cost of the base itself: The first base is given to you (although you have to pay for any new bases you want to build), and the cost of base components remains constant throughout the game. The "money" I am referring to here is the wealth of the nation in which you choose to locate the base. For a complete explanation of how base placement and money are tied together, see Chapter 5, "Finance."

Positioning your first base in the center of the United States tends to be a very good choice. The U.S. is the single largest contributor of X-COM funds and is heavily populated. A base whose protection covers most of this country keeps your largest investor happy. As a small bonus, UFOs in Canada can also be detected from here, if you choose the location carefully. This way, you can also keep your friends to the north happy. Figure 3-14 shows an ideal location for the first base.

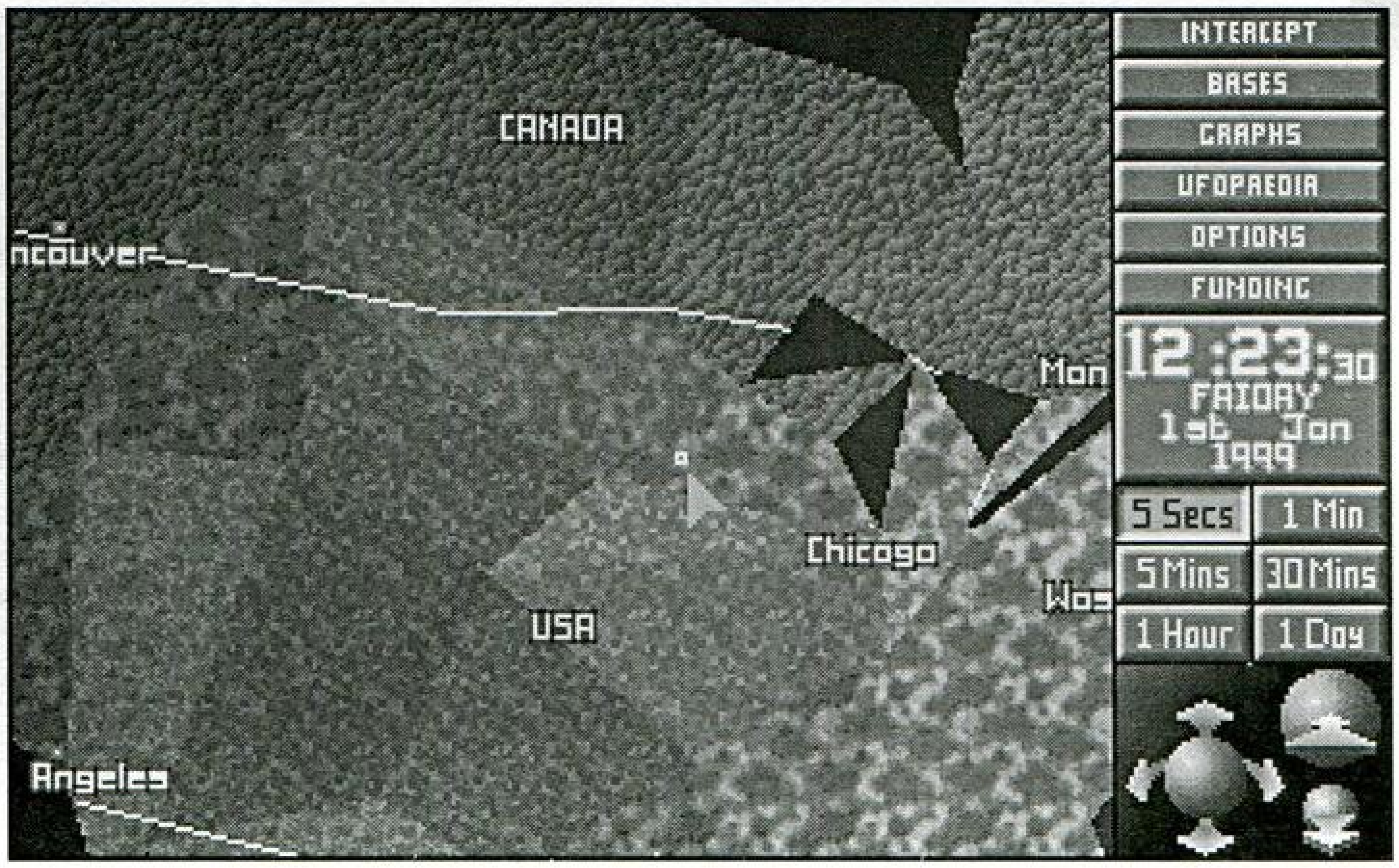

CANADA
ncouver
Mon
Chicago
Was
USA
Angeles
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
12 :23:30
FRIDAY
1st Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 3-14. An X-COM base defending the USA and Canada.

Good alternative sites for the first base and excellent sites for additional bases include:

- **Europe:** A base in the Alps can cover the better part of France, Spain, Germany, and Italy (see Figure 3-15).
- **South East Asia:** A base located near the Pacific coast covers parts of China and Russia as well as Japan (see Figure 3-16).

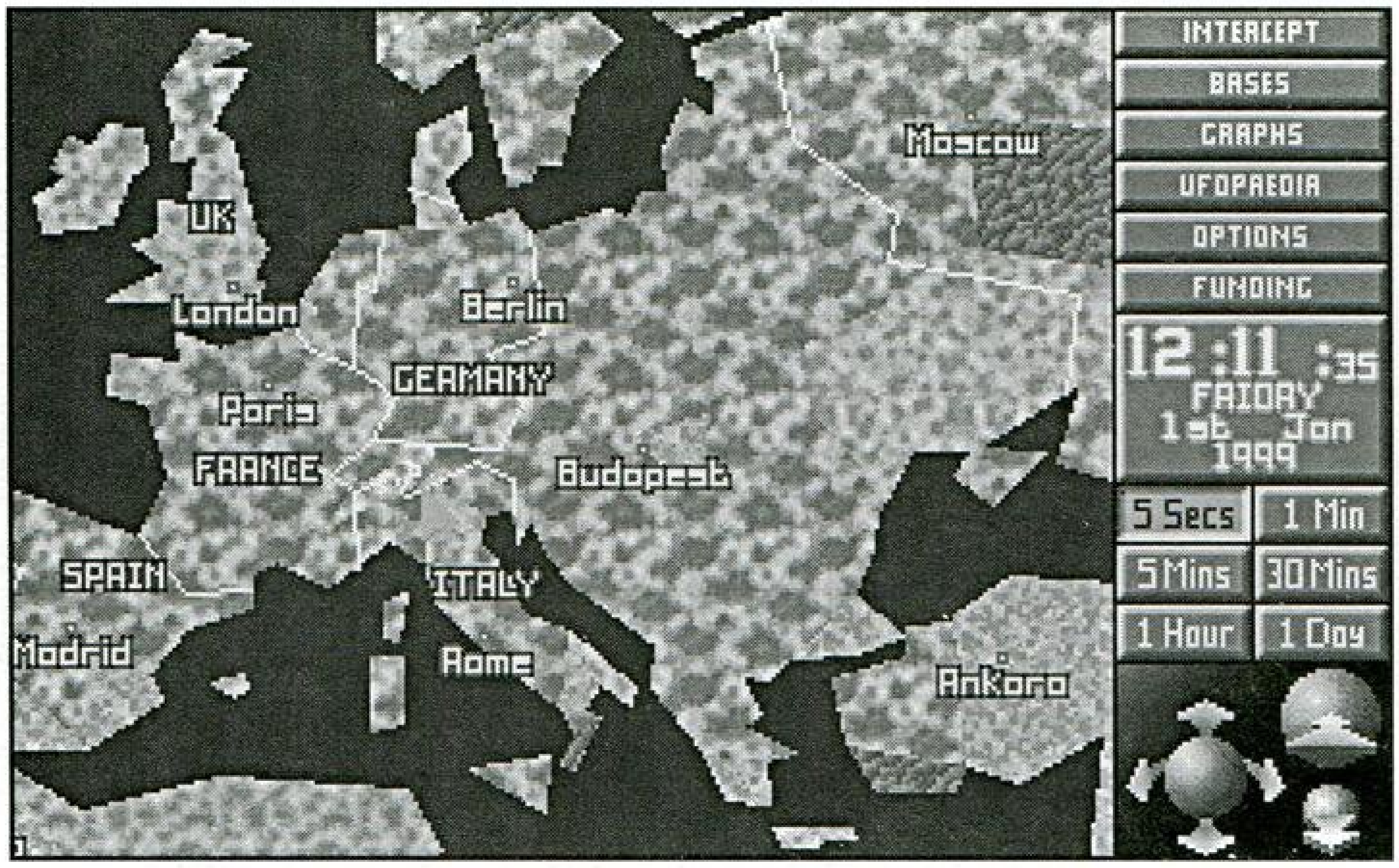

Moscow
UK
London
Berlin
GERMANY
Paris
FRANCE
Budapest
SPAIN
ITALY
Madrid
Rome
Ankara
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
12 :11 :35
FRIDAY
1st Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 3-15 A good base location in Europe.

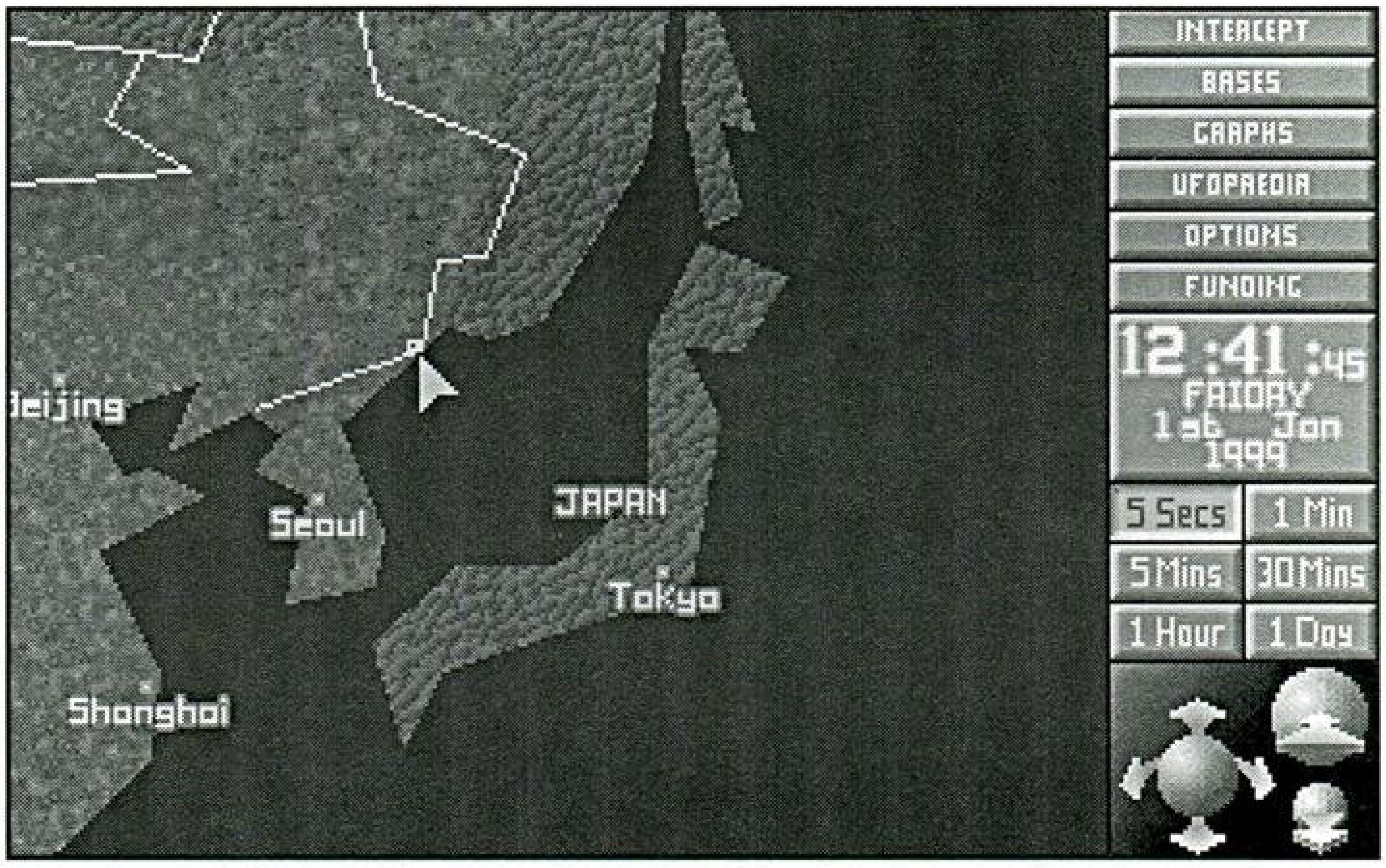


Figure 3-16
A good base location in South East Asia.

NAMING YOUR BASES

After choosing the location for the base, you are asked to type a name for the base. You can use any name you want. I recommend that you select a name that tells you, at a glance, where the base is located. For example, you might call a base located in the United States "USA 1," or one located in the Alps in Europe "Alpine Station." City names also work well, provided you can remember where a given city is! All units, such as interceptors and transports, are referenced in the game by the name of the base where they are stationed.

Naming the bases with geographic references allows you to select an intercepting unit from the menu quickly, without having to refresh your memory about which base is where. This is a good time-saving measure later in the game, when you may have as many as eight bases operational in various parts of the world.

It can be a costly mistake to send out an Interceptor from base Bob-7 to intercept a UFO over the Pacific, only to belatedly remember that base Bob-7 is in England! By the time the Interceptor gets to the UFO's former position, the UFO has already landed and begun terrorizing the innocent populace of Tokyo, which happens to be right next to base Bob-2. This terror mission might have been avoided if only Bob had named his bases London-7 and Tokyo-2.

An Interceptor launched from the correct base might have shot down the alien terror ship before it could land.

BASE FACILITIES

All X-COM bases are made up of individual, modular units referred to as *base facilities*. In all, 17 different facilities are available throughout the game. These 17 facilities can be broken down into three major categories: general facilities, detection systems, and base defenses. A number of these facilities can be constructed from the beginning of the game, and others become available later in the game as research on certain alien items is completed.

Depending on the complexity of the structure, base facilities require anywhere from 1 to 38 days to complete. Each individual facility has an initial construction cost as well as a maintenance cost that is automatically deducted from your funding each month. Table 3-1 lists all the base facilities, including base defenses, along with construction times, construction costs, and maintenance costs.

General Facilities

General facilities include living quarters, labs, hangars, and other maintenance-type facilities. This section has an alphabetical listing of all general facilities structures, along with a description of their functions.

Access Lift

Construction Time: 1 day

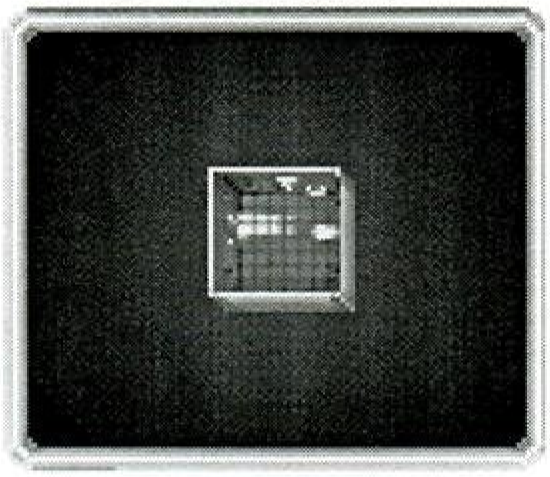
Construction Cost: $300,000

Maintenance Cost: $4000

The access lift is a two-story structure used to transfer equipment and personnel between the surface and the underground base. This is the first facility built in any X-COM base. When you build a new base, you are automatically prompted for the placement of an access lift. Only one access lift can be built at each base.

Table 3-1 Construction and Maintenance of Base Facilities

X-COM Base Facility	Construction Time (days)	Construction Cost	Maintenance Cost (monthly)
Access Lift	1	$300,000	$4000
Alien Containment	18	$400,000	$15,000
Fusion Ball Defenses	34	$800,000	$14,000
General Stores	10	$150,000	$5,000
Grav Shield	38	$1,200,000	$15,000
Hangar	25	$200,000	$25,000
Hyper-wave Decoder	26	$1,400,000	$30,000
Laboratory	26	$750,000	$30,000
Large Radar System	25	$800,000	$15,000
Laser Defenses	24	$400,000	$10,000
Living Quarters	16	$400,000	$10,000
Mind Shield	33	$1,300,000	$5,000
Missile Defenses	16	$200,000	$5,000
Plasma Defenses	34	$600,000	$12,000
Psionic Laboratory	24	$750,000	$16,000
Small Radar System	12	$500,000	$10,000
Work Shop	32	$800,000	$35,000



Alien Containment

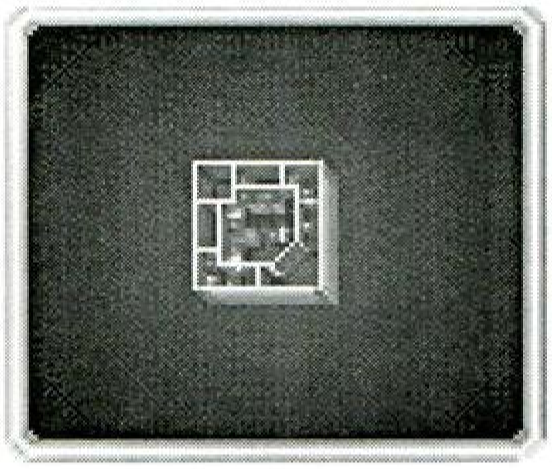
Construction Time: 18 days

Construction Cost: $400,000

Maintenance Cost: $15,000

Several species of aliens make up the invasion force, none of which can survive for long periods of time in Earth's atmosphere.

Aliens captured alive die soon after they are returned to a base unless a proper environment is provided for them. Each Alien Containment facility provides housing for as many as ten aliens in separate, self-contained habitat modules. Any base conducting ground attack missions should have at least one Alien Containment facility available.



General Stores

Construction Time: 10 days

Construction Cost: $200,000

Maintenance Cost: $5000

A General Stores facility is basically a combination warehouse, armory, and general-purpose storage shed. All equipment, weapons, ammunition, heavy-weapons platforms, recovered artifacts, and alien corpses are stored here, with the exception of items assigned to and stored on transport craft.

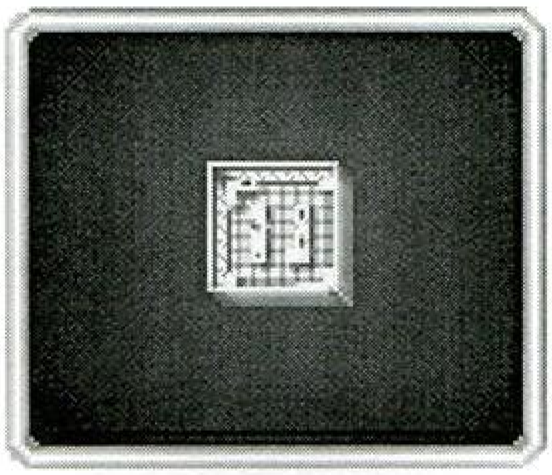
Hangar

Construction Time: 25 days

Construction Cost: $200,000

Maintenance Cost: $25,000

Each Hangar facility provides docking, maintenance, repair, rearming, and refueling facilities for a single X-COM craft. Each craft assigned to a base must have its own hangar assigned to it and cannot use another craft's hangar, even if the other craft is on a mission.



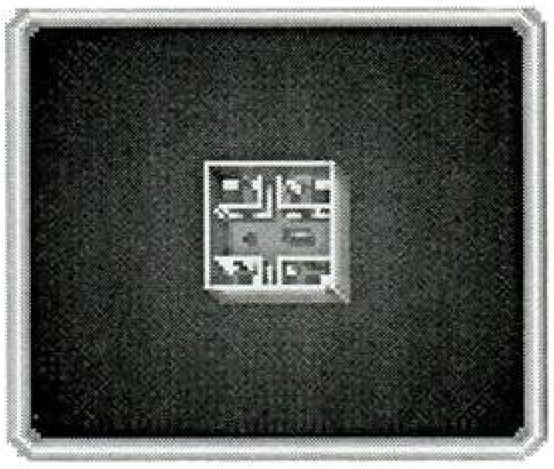
Laboratory

Construction Time: 26 days

Construction Cost: $750,000

Maintenance Cost: $30,000

This modern research facility is stocked with the most sophisticated examination and analysis equipment available. Laboratories are used to perform research into new technologies, examine alien artifacts, and conduct biomedical research on both living and dead aliens. Each laboratory provides research facilities for as many as 50 scientists.



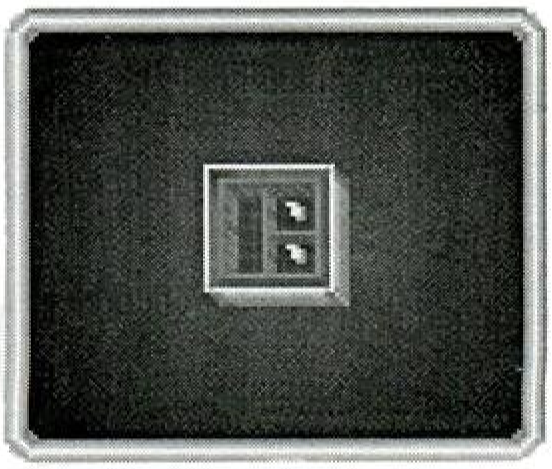
Living Quarters

Construction Time: 16 days

Construction Cost: $400,000

Maintenance Cost: $10,000

Each Living Quarters facility provides living accommodations for any combination of 50 soldiers, scientists, and engineers. These accommodations include sleeping quarters, food preparation facilities, and recreational facilities.



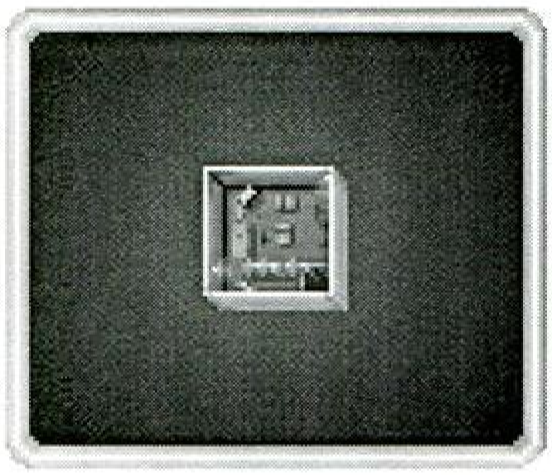
Psionic Laboratory

Construction Time: 24 Days

Construction Cost: $750,000

Maintenance Cost: $16,000

The Psionic Laboratory, or Psi Lab, assesses the psionic ability of all X-COM soldiers stationed at a base. The Psi Lab can then be used to train selected soldiers to develop and use their psionic skills. Each Psi Lab can train as many as ten soldiers at a time. Soldiers can be sent to psionic training at the end of each month. Psionic skills developed in the Psi Lab can be used in conjunction with a Psi Amp for psionic attacks on aliens. (See Chapter 10, "Ground Assaults," for details on the use of psionics.) Extensive research into aliens and their equipment is required in order to build this facility. (See Chapter 6, "Research and Manufacturing," for research details.)



Work Shop

Construction Time: 32 days

Construction Cost: $800,000

Maintenance Cost: $35,000

Full development and construction facilities are used by engineers for the construction of new equipment based on ongoing laboratory research. As many as 50 engineers can occupy a single work shop, but the items under construction also require space. Larger items, such as spacecraft, take up a great deal of space, thus limiting the number of engineers who can work on the project.

Detection Systems

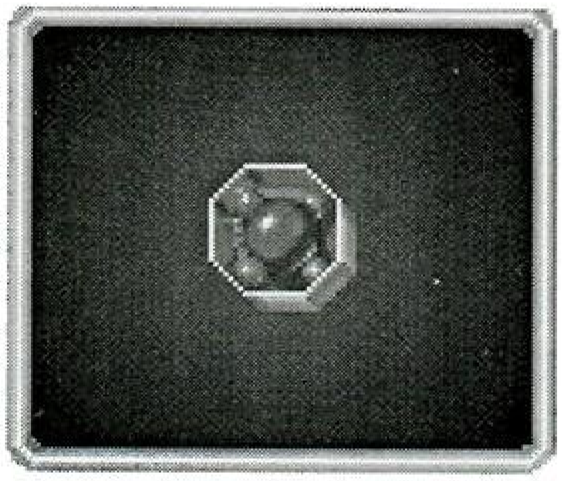
Detection systems allow for the location and pinpoint tracking of UFO activity over a limited area. Every base should have some sort of detection system to operate effectively.

Two systems are available for construction at the beginning of the game: the large and small radar systems. These systems operate in much the same way as present-day detection systems do, tracking air activity of UFOs over a certain range. In addition, X-COM radar systems also have the capability to track ground activity after the UFO has landed. This tracking is made possible through a radio link to an array of orbiting satellites that use infrared and other detection apparatuses to pinpoint a grounded UFO within detection range and transmit its coordinates back to the X-COM base.

The third detection system, known as a Hyper-wave Decoder, is a much more sophisticated device that locates UFOs by tracking their communications.

Without a detection system in place, a base becomes far less effective. Because of the limited detection ranges, all the UFO tracking data obtained is in the area of the base with detection equipment. If your second base is halfway around the world, the base may lose tracking before an Interceptor launched from that base can arrive. In addition, the Interceptor runs low on fuel soon after it arrives, causing it to be recalled to the base, often before the mission is complete.

The remainder of this section is an alphabetical listing of each base defense, along with a description of each.



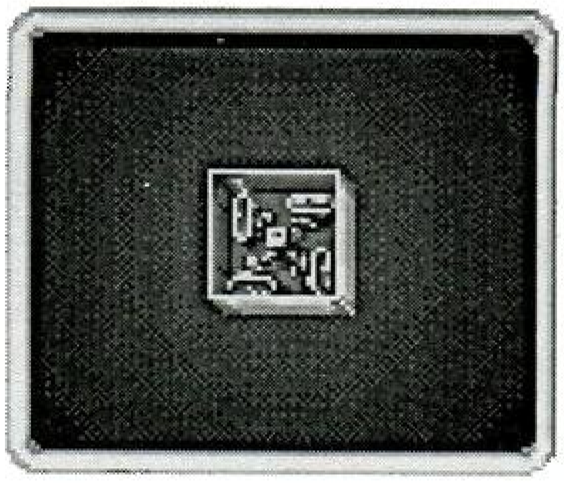
Hyper-wave Decoder

Construction Time: 26 days

Construction Cost: $1,400,000

Maintenance Cost: $30,000

All alien communications are carried on a superdimensional wavelength known as *hyper-wave*. The Hyper-wave Decoder intercepts and translates transmissions between UFOs and their bases. The transmissions reveal the location and type of UFO, the type of alien species that is on board, and the UFO's current mission. This sophisticated detection system is far more effective than conventional radar and has an effective range of 2400 nautical miles. Extensive research into aliens and their equipment is required to build this facility. (See Chapter 6, "Research and Manufacturing," for research details.) Hyper-wave Decoders automatically detect every UFO within range.



Large Radar System

Construction Time: 25 days

Construction Cost: $800,000

Maintenance cost: $15,000

This conventional radar-and-detection array has an effective range of 2250 nautical miles. The system is linked to a worldwide satellite network that allows for detailed ground-level searches as well as conventional air searches. Each system has a 10 percent chance every 30 game-minutes to detect an object.

Small Radar System

Construction Time: 12 days

Construction Cost: $500,000

Maintenance Cost: $10,000

This conventional radar-and-detection has with an effective range of 1500 nautical miles. The system is linked to a worldwide satellite network that allows for detailed ground-level searches as well as conventional air searches. Each system has a 10 percent chance every 30 game-minutes to detect an object.

Table 3-2 displays the statistical information for the detection systems at a glance.

Base Defenses

In addition to setting up your base to handle scientific, production, housing, and detection tasks, it is eventually necessary to build defensive systems to protect it from alien invasion.

All X-COM bases are built underground. The location of these top-secret facilities is known only to those manning the base and to the government officials running the project. It is unlikely that they will be discovered by accident. As more and more intercept missions are successfully launched from the base, however, the aliens

Table 3-2 Effectiveness of Detection Systems

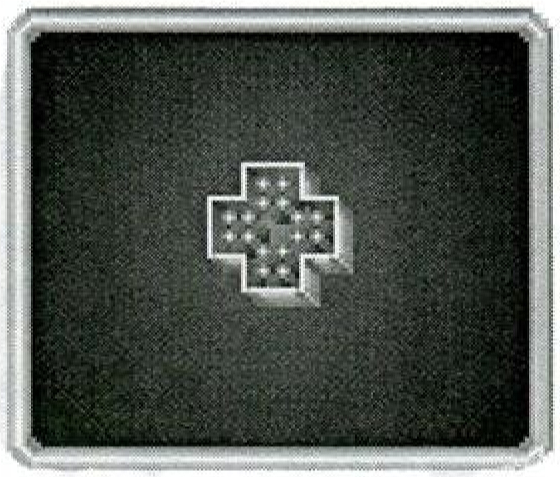
System	Range	Chance of Detecting UFO
Hyper-wave Decoder	2400 nautical miles	100 percent
Large Radar System	2250 nautical miles	5 percent every 10 game-minutes
Small Radar System	1500 nautical miles	5 percent every 10 game-minutes

begin to actively search for the source of the attacks that are destroying their ships. After a base is located, UFOs begin to attempt landings near the base. If the landing is successful, an alien invasion force is sent into the base, and you are forced to defend the base from within.

At the beginning of the game, especially at lower difficulty levels, X-COM bases are relatively safe. But later in the game, and at higher difficulty levels, you should set up defensive systems to prevent the UFOs from landing—or at least to reduce the number of invading forces by damaging their ship before it lands. After the base is discovered, these landing attempts become fairly frequent.

A number of defensive systems are at your disposal to help protect your bases. After they're built, these systems are completely automated: If a UFO attempts a landing, each defensive system at the base fires one time. If it's successful, the defense systems may destroy the UFO and prevent the landing. It is unlikely that a single shot from any of the available defensive systems will destroy anything but the smallest of the UFOs. Several systems firing in tandem, however, make an effective defensive net. The addition of shielding systems also significantly increases the base's chances of successfully repelling an attack.

The following is an alphabetical listing of the available base defensive systems, along with descriptions and statistics. Defense Value indicates the amount of damage per hit the weapon produces. Hit Ratio is the percentage chance of the weapon effectively hitting a UFO every time it fires.



Fusion Ball Defenses

Construction Time: 34 days

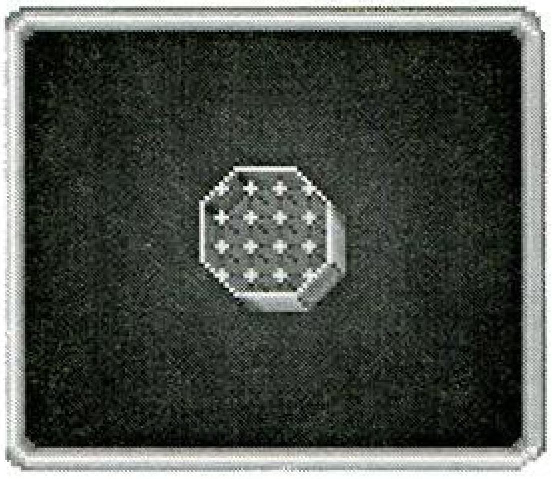
Construction Cost: $800,000

Maintenance Cost: $14,000

Defense Value: 1200

Hit Ratio: 80 percent

The most powerful base defensive system available, the Fusion Ball Defenses utilize a launching system which delivers a fusion projectile that detonates on impact with an alien vessel, producing an anti-matter implosion. It is also the most accurate base defensive system. Extensive research into alien technology is required in order to build this weapon. (See Chapter 6, "Research and Manufacturing," for research details.)



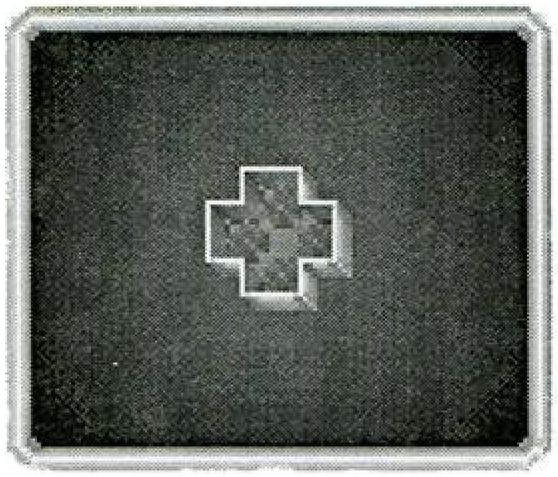
Grav Shield

Construction Time: 38 days

Construction Cost: $1,200,000

Maintenance Cost: $15,000

This advanced shielding array utilizes the anti-gravity technology used to propel alien spacecraft to set up a field that repels UFOs attempting to land near the base. It delays the UFO's landing long enough for all of the base's defensive systems to fire twice rather than once, thereby effectively doubling the base's defensive capability. Extensive research into alien equipment is required in order to build this facility. (See Chapter 6, "Research and Manufacturing," for research details.)



Laser Defenses

Construction Time: 24 days

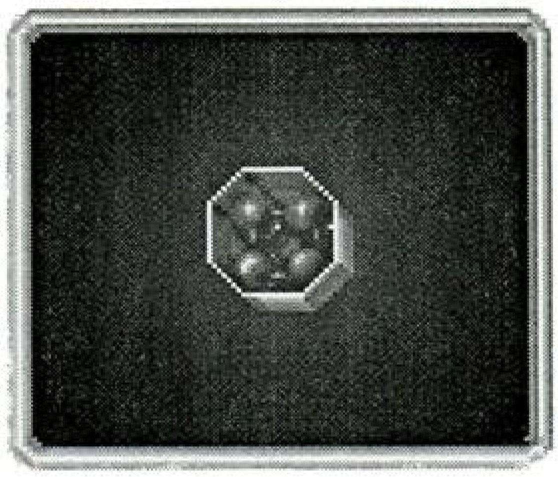
Construction Cost: $400,000

Maintenance Cost: $10,000

Defense Value: 600

Hit Ratio: 60 percent

A large-scale extension of laser technology, the Laser Defense facility provides a base defense slightly more accurate and more powerful than conventional Missile Defenses. Research into all forms of laser weapons must be completed before this facility can be built. (See Chapter 6, "Research and Manufacturing," for research details.)



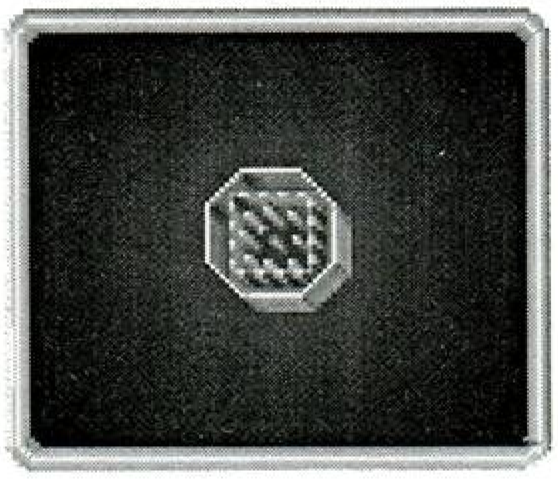
Mind Shield

Construction Time: 33 days

Construction Cost: $1,300,000

Maintenance Cost: $5,000

One of the primary means used by the aliens to find the location of X-COM bases is their ability to detect the presence of humans by tracking human brain waves. The Mind Shield provides the best possible cover for an X-COM base by blocking the occupants' brain waves from alien detection. This defense drastically reduces the chances of a base being discovered and invaded by aliens. Extensive research into aliens and their equipment is required in order to build this facility. (See Chapter 6, "Research and Manufacturing," for research details.)



Missile Defenses

Construction Time: 16 days

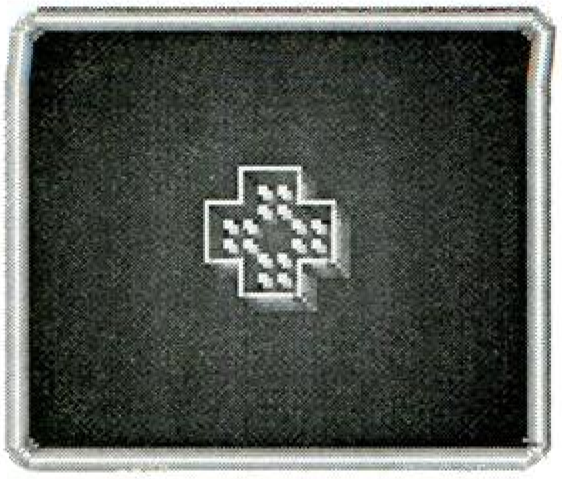
Construction Cost: $200,000

Maintenance Cost: $5,000

Defense Value: 500

Hit Ratio: 50 percent

The most primitive form of base defense, Missile Defenses provide minimal protection from alien craft attempting to land near the base. This defense system is the least accurate base defense and does the least damage, but it is also the least expensive for both construction and maintenance.



Plasma Defenses

Construction Time: 34 days

Construction Cost: $600,000

Maintenance Cost: $12,000

Defense Value: 900

Hit Ratio: 70 percent

A powerful and efficient development based on alien-built plasma weapons, the Plasma Defense utilizes a highly focused plasma beam to create a defense more powerful and accurate than a laser defense system. Research into alien plasma weapons is required before this facility can be built. (See Chapter 6, "Research and Manufacturing," for research details.)

Table 3-3 displays the statistics for all base defenses at a glance.

Table 3-3 Base Defenses

Defensive System	Defense Value	Hit Ratio	Notes
Missile Defenses	500	50 percent	—
Laser Defenses	600	60 percent	—
Plasma Defenses	900	70 percent	—
Fusion Ball Defenses	1200	80 percent	—
Grav Shield	Shield	—	Doubles the effectiveness of all defensive systems
Mind Shield	Shield	—	Shields human thought waves from alien detection

DESIGNING BASES

Good base design is a factor which is often overlooked by new X-COM players, but a well-designed base can save you a lot of unnecessary grief if you have to defend it from invading aliens. The following sections show you how to design a base that is both practical and defensible.

The First Base

Your first base is predesigned and is always the same when it is built at the beginning of each game. To see your base, click the Bases button on the Geoscape menu. The view switches automatically to the Bases screen. Figure 3-17 shows the layout of your initial base.

Your first base has the following facilities:

- 1 access lift
- 1 small radar system
- 3 hangars (one each for two Interceptors and one Skyranger)
- 1 laboratory
- 1 work shop
- 1 general store
- 1 living quarters (currently housing eight soldiers, ten scientists, and ten engineers)

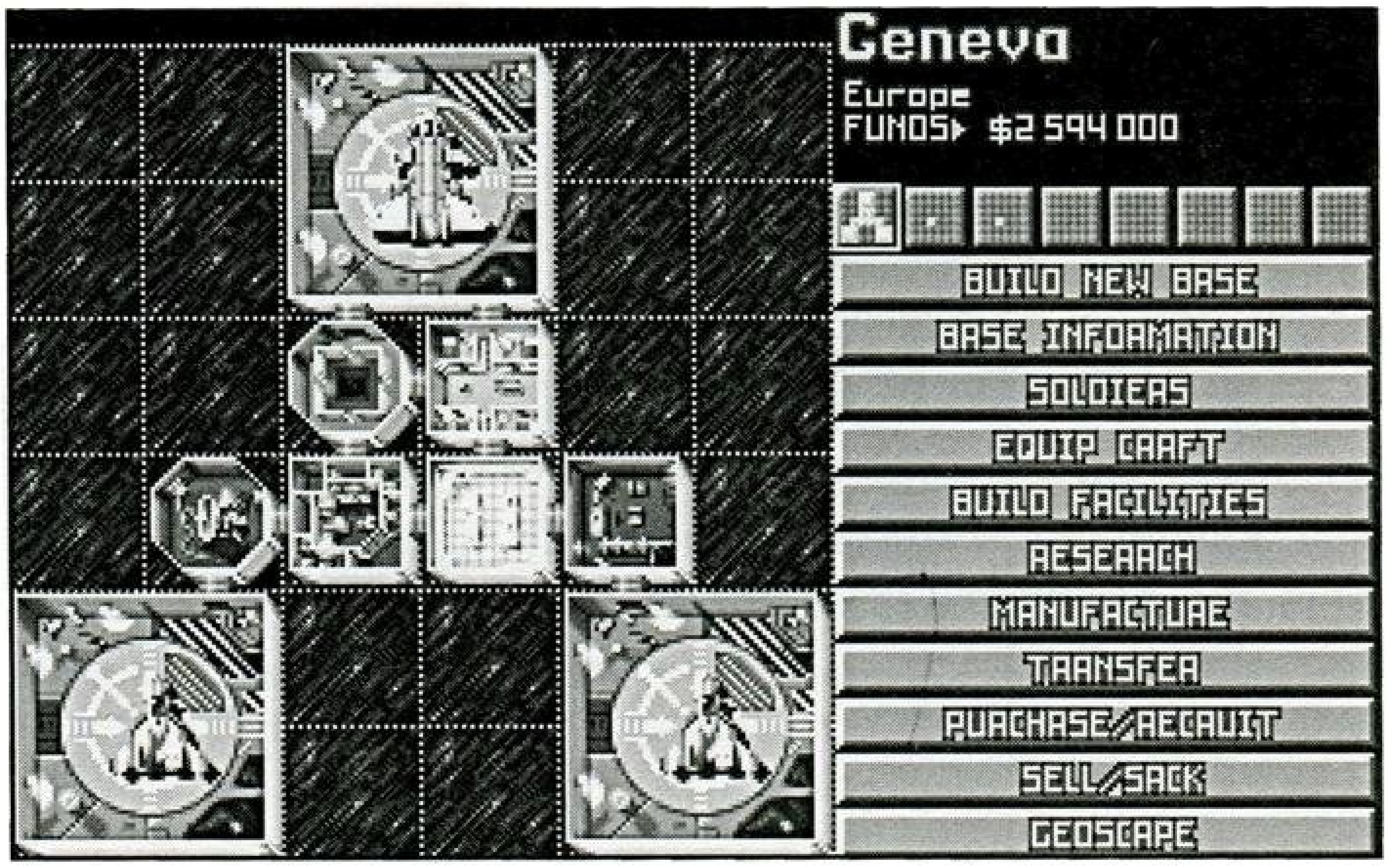

Geneva
Europe
FUNDS> $2 594 000
BUILD NEW BASE
BASE INFORMATION
SOLDIERS
EQUIP CRAFT
BUILD FACILITIES
RESEARCH
MANUFACTURE
TRANSFER
PURCHASE/RECRUIT
SELL/SACK
GEOSCAPE

Figure 3-17
Your first X-COM base.

This is a good start and provides a base suited to begin basic intercept and recovery missions. There are, however, a number of improvements you should make immediately.

To add a facility to your base, click on the Build Facilities button on the Base menu options. A list of the facilities available for construction appears. Select the facility you want to build by clicking on it. Then move the cursor to the Base Display and click the square in which you want to put the new structure. Please note that new structures must be placed adjacent to an existing structure.

Add the following improvements to your first base immediately:

1. Build a second General Stores facility. After you begin visiting UFO crash sites and collecting artifacts and alien corpses, you find that you've quickly filled up the single storage area provided. After it's full, the items collected are stored in the remaining space in your Skyranger. After the Skyranger is full, you can no longer collect, buy, or manufacture any new items until more storage space is available.
2. Build an Alien Containment facility. It is dangerous to try to purposely capture live aliens at the beginning of the game. Through sheer luck, however, one of the aliens you think is dead at the end of a mission may have been only stunned. (You can tell whether they are only stunned because stunned aliens don't make any noise when they fall.) This stroke of good luck is wasted if there is nowhere to house the alien when you get back to the base. As you will see later, the interrogation of certain aliens is vital to completing the game.
3. Build a second set of living quarters. You start off with a total of only 28 residents at your base, but you will quickly need to increase your staff of soldiers, scientists, and engineers. You may as well be ready to house them when you need them.
4. Finally, begin construction on a second laboratory. Research is the single most important factor in the game, and more laboratory space equals more ability to research. Operating multiple LABORATORIES and keeping them staffed is expensive in the short run but invaluable in the long run.

You may be tempted to build a defense system at your base immediately as well. In theory, this isn't a bad idea. Defense systems reduce the severity of alien attacks on your base (when they manage to successfully hit the aliens, that is). In practice, however, aliens don't attack your base early in the game, especially at the lower levels of difficulty. It is better to save your money for other, more important items at the beginning of the game, such as more scientists and better weapons.

It takes a while for all the structures to be built, but there is plenty to do while you wait. And when the action really begins to heat up, your base is ready for action.

Starting New Bases

As the game progresses, UFO activity increases throughout the world. You may eventually discover that you are frequently sending your Interceptors and Skyrangers halfway around the world in order to stop alien attacks on other continents as well as having to continue to provide adequate protection in the area immediately surrounding the base.

One solution to this problem is to build more Interceptors and hangers. This strategy turns out to be unacceptable in the long run because you not only run out of space for new hangars, but you also end up not intercepting most of the UFOs because they are gone before you can get to them! When this is the situation, it is probably time to build another base.

To begin construction on a new base, click the Build New Base button on the Base Options menu. You are prompted with the cost of beginning the construction. The cost of establishing a new base varies depending on in which area of the world you decide to build. Starting costs for each area are shown in Table 3-4.

When you click OK to accept the cost, the Geoscape screen appears. Select a suitable location for the base and name it by using the guidelines you used when you were placing and naming your first base. Make sure that the new base is far enough away from the original base so that it covers a different part of the world.

After the base is placed and named, a new Base screen comes up. As shown in Figure 3-18, the area that normally shows the base

Table 3-4 Cost for Establishing New Bases By Territory

Area	Startup Cost
Antarctica	$900,000
Arctic	$950,000
Australasia	$750,000
Central Asia	$500,000
Europe	$1,000,000
North Africa	$650,000
North America	$800,000
Pacific	$600,000
Siberia	$800,000
South America	$600,000
South East Asia	$750,000
Southern Africa	$550,000

structures is blank, and you are prompted to select a location for the access lift.

After placing the access lift, you can add whatever structures you want to build at the new base.

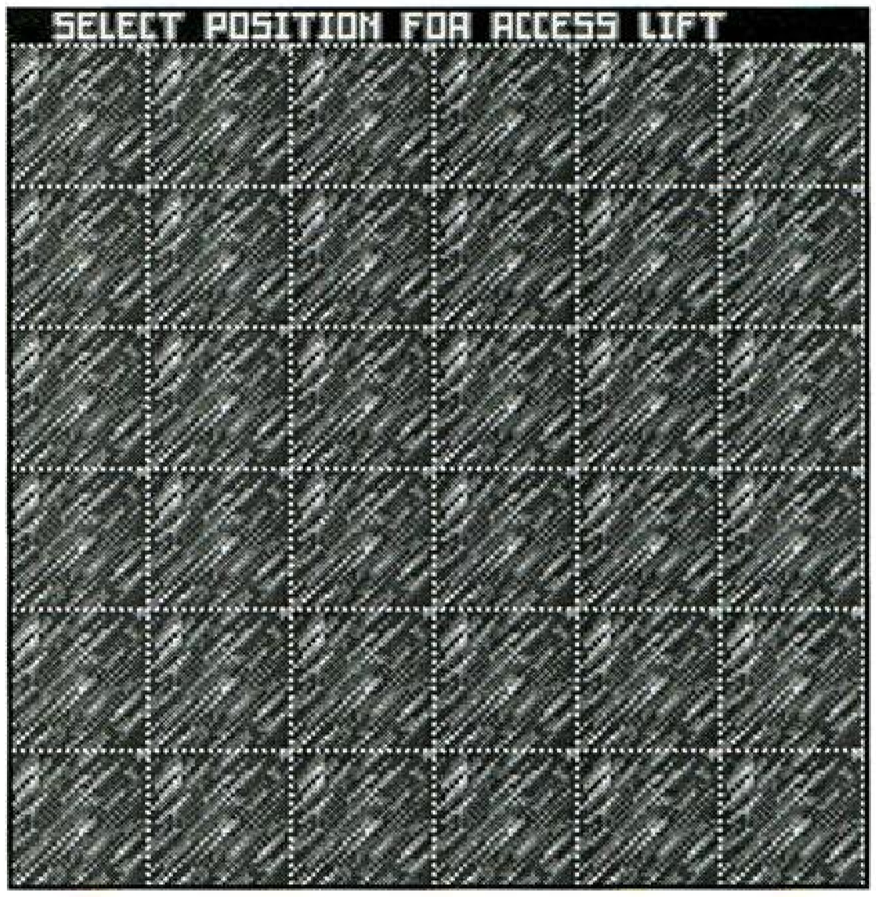


Figure 3-18
Building a new base.

As new bases are built, they appear in miniature form on the Active Base Indicator. To see the detailed view of any base, click on its image on the Active Base Indicator. The name and location of the base currently displayed appears in the Information Box.

Building Strategically

You may find that even the most well-defended bases are subject to an occasional alien invasion. If your original base is invaded, you may find that it is difficult to defend. The reason is that the design of the first base potentially allows alien forces to enter from several different directions at one time. You have no choices in the basic layout of the first base, short of destroying many of the structures and rebuilding it from the ground up. This method is costly, time-consuming, and just plain unfeasible. You just have to live with the design and defend it as well as you can. With new bases, however, you have the opportunity to use some ingenuity when you're laying out the structure of the base, making it easier to defend in case of invasion.

When aliens invade your base, they are able to enter the base only through structures that are open to the outside. The only two base facilities that fit this description are the access lift and the hangars. If these structures are placed logically, Base Defense battles can be quick and successful, with few or no losses in the way of personnel or equipment. If you place them illogically, you have to spread your forces thin to cover all possible entry points. Aliens may slip through and hide in the upper levels of the base. When this happens, losses tend to be high, and you may end up spending hours of your time tracking down the one last alien who is hiding in some dark, upstairs corner.

Figure 3-19 shows a fully built, strategically designed base.

Note that the hangars are located in a cluster at the south end of the compound. The vulnerable structures are connected to the base by the access lift. The rest of the base is laid out on the north side of the access lift.

In a Base Defense situation, all the invading forces are forced to enter through the south end of the base. To keep them from escaping into the main section of the compound, only the northern exit from the access lift has to be blocked. If you leave a couple of

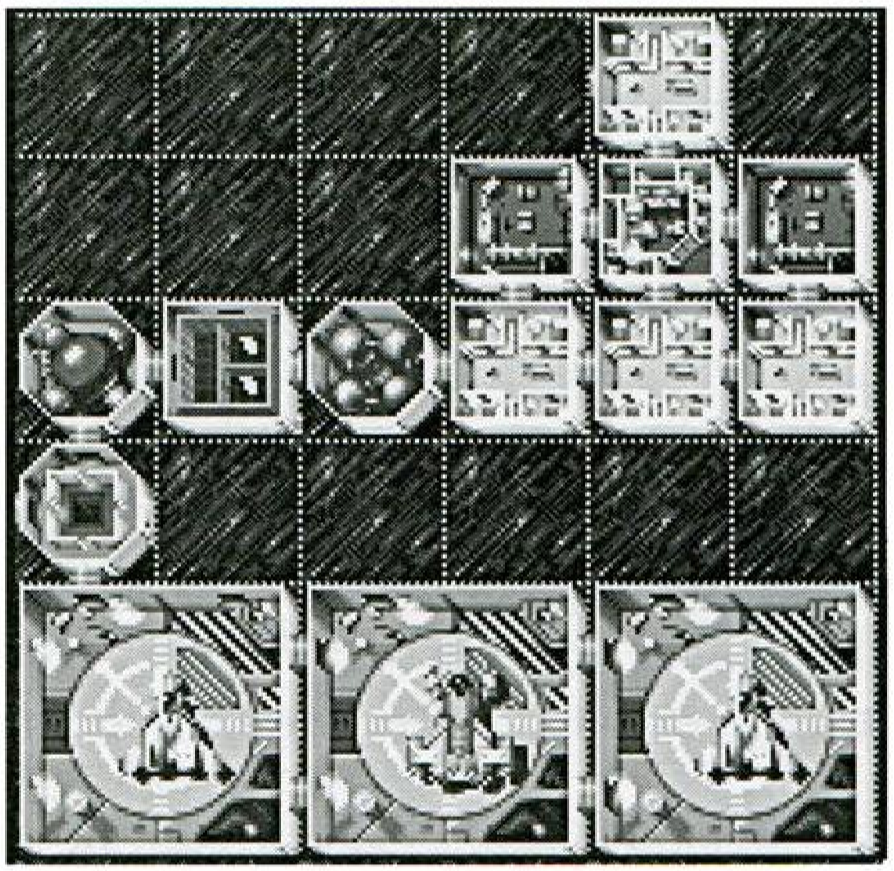


Figure 3-19
A strategic base design.

soldiers to guard the corridor, the rest of the squad can be sent to sweep through the access lift and the hangars, quickly ridding the base of invaders with minimal hassle.

Functions of Auxiliary Bases

A major mistake made by many beginning players is the tendency to "put all their eggs in one basket"—or, to put it in *X-COM* terms, put all their facilities in one base. It is possible, especially on the easier levels, to get through an entire game with only a single base in operation, and most people tend to play the game as though this situation were a given. When other bases are built during the course of the game, there is a tendency to use the secondary bases as radar "listening posts" to detect UFOs in other parts of the world or as launch stations for Interceptors.

These types of bases tend to be operated on the bare essentials: an access lift, a radar system, a General Stores facility, and a hangar or two to house Interceptors. All other operations, such as research, manufacturing, and the entire complement of men and equipment for ground attack missions are housed in the original base built at the beginning of the game.

This strategy has many flaws. First, the bare-bones launch stations are extremely vulnerable to attack. One of the things that causes the aliens to seek out X-COM bases is the repeated destruction of UFOs in a given area. Sending Interceptors out to repeatedly shoot down UFOs draws attention to the area surrounding the base. If the base is located, it can easily fall, undefended, to an alien attack. This results in a great loss of money, in the form of base facilities and expensive Interceptors.

Second, if all your key research and manufacturing facilities and personnel are housed in a single location, what happens if that location is successfully invaded? Even if there is a skeleton crew at one of your smaller bases around the world, it is unlikely that you will ever recover sufficiently from the loss of all your research facilities, personnel, and equipment.

The lesson here is simple: Rather than build a number of small launch-station bases, build up all your bases so that each one can operate as an independent unit in the unlikely (but certainly possible) event that all other bases are overrun by alien forces. Full-scale bases are expensive to build and maintain, but their cost is nothing compared to the devastating loss of every last soldier, scientist, engineer, and piece of equipment at your one fully operational base.

How Many BasesAre Enough?

The number of bases you build in the game should be based on the amount of UFO activity in the world and the overall happiness of the countries contributing X-COM funding. Remember that countries being plagued by UFO activity quickly become displeased with you and decrease or cut your funding. If too many countries become unhappy, you'll find yourself without enough money to support even one base.

If a single base is providing adequate protection, and no major loss of funding is occurring because of unhappiness, you don't have to bother building another base. In the easier levels, it is possible to win the game without ever building a second base. It is important to note, however, that a single base becomes increasingly susceptible to attack as the game progresses and the aliens become more aggressive. If you have multiple bases and one of them is lost because of an invasion, the game goes on. If you have only one base, however, and you lose a Base Defense battle, the game is over!

If you decide that the need is great enough to build a second base and you have the money for it, choose the location carefully. You should base your choice on the same factors you used in placing your first base, but you must also take into account the areas in which UFO activity is the highest. This information can be determined by consulting the UFO activity graphs. (See Chapter 2, "The Geoscape Screen," for more details.) Keep in mind that it takes a great deal of time to build a functional base, generally well over a month, so don't wait until a rich country is very unhappy with your progress to build a base to protect them. If you do, you just might end up bringing a new base on line in a country that has already cut off your funding and signed a pact with the aliens.

You may have a temptation to build too many bases in an attempt to protect the entire world. This strategy is impractical. Although you may have saved enough money to build many bases, you still have to consider the cost involved in operating and maintaining the bases each month. As shown in Table 3-1, earlier in this chapter, each base facility has a monthly maintenance cost. It also takes money to pay your soldiers, scientists, and engineers (they're not volunteers, you know!), and X-COM spacecraft carry a monthly rental fee equal to their original purchase price.

Even the smallest base, consisting of only an access lift; one hangar and a Skyranger; a small radar system; one Living Quarters module; one laboratory; one work shop; and one General Stores module and staffed with ten soldiers, scientists, and engineers, has a monthly cost of $1,369,000! With your original base and four or five smaller bases going at the same time, it is easy to see that you can end up spending all your money on bases and salaries and not have enough to continue to supply your soldiers with weapons and equipment.

The lesson to be learned is not to overextend your budget by building too many bases. Two or three bases, strategically placed throughout the world, can do the job just as well without costing you a fortune in monthly maintenance.

Alien Detection of X-COM Bases

UFOs have a chance of detecting an X-COM base from as far as 240 nautical miles away. When X-COM interceptors have shot down a large number of UFOs in the vicinity of an X-COM base, one of the possible results is that the aliens may begin actively searching for the base. Because X-COM bases are located underground, the search is conducted by homing in on the brain waves of the base's occupants.

Small bases, with limited personnel and facilities, are more difficult to detect than are large bases with a large complement of personnel. Building a Mind Shield defense at a base makes it much more difficult to detect.

Chapter Four

X-COM HARDWARE

Now you know where to put your base and how to build it so that it is practical and defensible. Of course, having a bunch of bases, even well-built bases, doesn't do you any good unless you stock them with the equipment your soldiers and scientists need in order to do their jobs.

X-COM offers a variety of craft, equipment, and weapons from which to choose. Some of these items are available from the beginning of the game, and others require research of one (or many) advanced or alien technologies in addition to the acquisition of one or more alien materials. Many basic items available at the beginning of the game may serve you well throughout the game, and others quickly become obsolete as soon as your scientists have had a chance to do a little research.

This chapter presents a complete shopping list of all craft, equipment, and weapons available in the game. The basic statistics of each item, including cost, manufacturing time, and materials needed to build, are included, in addition to information about how each piece of equipment functions.

ITEMS THAT CAN BE PURCHASED VERSUS ITEMS REQUIRING RESEARCH

Each game begins with X-COM forces working at a technology level not much higher than mankind has reached in our world by 1994. Craft are based on designs similar to present-day jet fighters and space shuttles. Craft weapons are based on cannons and missiles, and anti-personnel weapons are based on chemically propelled projectiles (bullets and rockets) and thrown explosives (hand grenades).

This type of equipment is available at the beginning of the game and remains available throughout the game. You can purchase any of these items by clicking on the Purchase/Recruit option on the Bases screen and selecting the item from the Purchase/Hire Personnel screen, as described in Chapter 3, "X-COM Bases."

Table 4-1 shows a complete listing of all craft, weapons, and equipment available at the beginning of the game, along with their purchase price and other information. (**Note:** Descriptions of soldiers, scientists, and engineers are not included in this chapter because they are, after all, not objects. Personnel are covered in detail in other sections of this book.)

As the game progresses, more advanced items become available. Advanced items cannot be purchased; they must be manufactured by your engineers. Table 4-2 lists all the items in the game that require research and manufacture.

This section lists by category all the items available in the game. Within each category, they are divided into items that can be purchased (basic) and items that must be researched and manufactured (advanced).

BASIC CRAFT AND AIR-TO-AIR WEAPONS

First, we will take a look at the vehicles used by X-COM. These air- and spacecraft are used to intercept UFOs and to transport your soldiers and equipment to and from the sites of Ground Assaults. This first group of craft and weapons are those which are available for use at the start of the game.

Table 4-1 Craft, Weapons, and Equipment That Can Be Purchased

Item	Category	Cost Per Unit
Soldier	Personnel	$40,000
Scientist	Personnel	$60,000
Engineer	Personnel	$50,000
SKYRANGER	Craft	$500,000
INTERCEPTOR	Craft	$600,000
Stingray Launcher	Craft Weapon	$16,000
Avalanche Launcher	Craft Weapon	$17,000
Cannon	Craft Weapon	$30,000
Stingray Missile	Craft Ammunition	$3000
Avalanche Missile	Craft Ammunition	$9000
Cannon Rounds (x 50)	Craft Ammunition	$1240
Tank/Cannon	HWP	$420,000
HWP Cannon Shells	HWP Ammunition	$200
Tank/Rocket Launcher	HWP	$480,000
HWP Rockets	HWP Ammunition	$3000
Pistol	Weapon	$800
Pistol Clip	Ammunition	$70
Rifle	Weapon	$3000
Rifle Clip	Ammunition	$200
Heavy Cannon	Weapon	$6400
HC-AP Ammo	Ammunition	$300
HC-HE Ammo	Ammunition	$500
HC-I Ammo	Ammunition	$400
Auto-Cannon	Weapon	$13,500
AC-AP Ammo	Ammunition	$500
AC-HE Ammo	Ammunition	$700
AC-I Ammo	Ammunition	$650
Rocket Launcher	Weapon	$4000
Small Rocket	Ammunition	$600
Large Rocket	Ammunition	$900
Incendiary Rocket	Ammunition	$1200
Grenade	Weapon	$300
Smoke Grenade	Weapon	$150
Proximity Grenade	Weapon	$500
High Explosive	Weapon	$1500
Stun Rod	Weapon	$1260
Electro-Flare	Equipment	$60

Table 4-2 Craft, Weapons, and Equipment Which Must Be Researched and Manufactured

Item	Category	Cost Per Unit	Engineer-Hours to Produce	Work Space Required	Special Materials Required
Alien Alloys	Alien Artifact	$3000	100	10	—
Alien Grenade	Weapon	$6700	200	2	2 x Elerium-115
AVENGER	Craft	$900,000	34,000	36	120 x Alien Alloys 2 x UFO Power Source 1 x UFO Navigation
Blaster Bomb	Ammunition	$8,000	220	3	3 x Elerium-115
Blaster Launcher	Weapon	$90,000	1200	5	1 x Alien Alloys
FIRESTORM	Craft	$400,000	14,000	30	65 x Alien Alloys 1 x UFO Power Source 1 x UFO Navigation
Flying Suit	Personal Armor	$58,000	1400	16	5 x Alien Alloys 16 x Elerium-115
Fusion Ball	Ammunition	$28,000	600	6	4 x Elerium-115
Fusion Ball Launcher	Craft Weapon	$242,000	400	6	—
Heavy Laser	Weapon	$32,000	700	4	—
Heavy Plasma	Weapon	$122,000	1000	4	1 x Alien Alloys
Heavy Plasma Clip	Ammunition	$6000	80	4	3 x Elerium-115
Hovertank/Launcher	HWP	$900,000	1400	30	25 x Elerium-115 8 x Alien Alloys
Hovertank/Plasma	HWP	$850,000	1200	30	30 x Elerium-115 5 x Alien Alloys
HWP Fusion Bomb	HWP Ammunition	$15,000	400	25	5 x Elerium-115 8 x Alien Alloys
Laser Cannon	Craft Weapon	$182,000	300	6	—
Laser Pistol	Weapon	$8000	300	2	—
Laser Rifle	Weapon	$20,000	400	3	—
LIGHTNING	Craft	$600,000	18,000	34	85 x Alien Alloys 1 x UFO Power Source 1 x UFO Navigation
Medi-Kit	Equipment	$28,000	420	4	—
Mind Probe	Alien Artifact	$262,000	1200	4	1 x Elerium-115
Motion Scanner	Equipment	$34,000	220	4	—
Personal Armor	Personal Armor	$22,000	800	12	4 x Alien Alloys
Plasma Beam	Craft Weapon	$226,000	500	8	15 x Elerium-115
Plasma Pistol	Weapon	$56,000	600	3	1 x Alien Alloys

Table 4-2 Craft, Weapons, and Equipment Which Must Be Researched and Manufactured

Item	Category	Cost Per Unit	Engineer-Hours to Produce	Work Space Required	Special Materials Required
Plasma Pistol Clip	Ammunition	$2000	60	3	1 x Elerium-115
Plasma Rifle	Weapon	$88,000	820	4	1 x Alien Alloys
Plasma Rifle Clip	Ammunition	$3000	80	4	2 x Elerium-115
Power Suit	Personal Armor	$42,000	1000	16	5 x Alien Alloys 5 x Elerium-115
Psi-Amp	Weapon	$160,000	500	4	1 x Elerium-115
Small Launcher	Weapon	$78,000	900	3	1 x Alien Alloys
Stun Bomb	Ammunition	$7000	200	2	1 x Elerium-115
Tank/Laser Cannon	HWP	$500,000	1200	25	—
UFO Navigation	UFO Component	$150,000	1600	18	3 x Alien Alloys
UFO Power Source	UFO Component	$130,000	1400	22	5 x Alien Alloys 16 x Elerium-115

The statistics listed for craft are as follows:

- **Craft Type:** Fighter or transport craft
- **Cost:** Purchase or production price of the craft
- **Monthly Rental:** Fee paid to the contributing governments each month for use of the craft
- **Engineer-Hours to Produce:** How long it takes your engineers to build one craft
- **Special Materials Required:** Materials required to manufacture one craft
- **Work Space Required:** Number of work shop space units required to build one craft
- **Maximum Speed:** Maximum velocity of the craft
- **Acceleration:** Rate of acceleration of the craft (higher is better)
- **Fuel Capacity:** Maximum amount of fuel carried by the craft
- **Weapon Pods:** Number of hard-points for mounting weapons on the craft

- **Damage Capacity:** Number of damage points it takes to destroy the craft
- **Cargo Space:** Space for carrying personnel and their equipment
- **HWP Capacity:** Maximum number of HWPs (tanks and hovertanks) that may be carried by the craft

The statistics listed for air-to-air weapons are as follows:

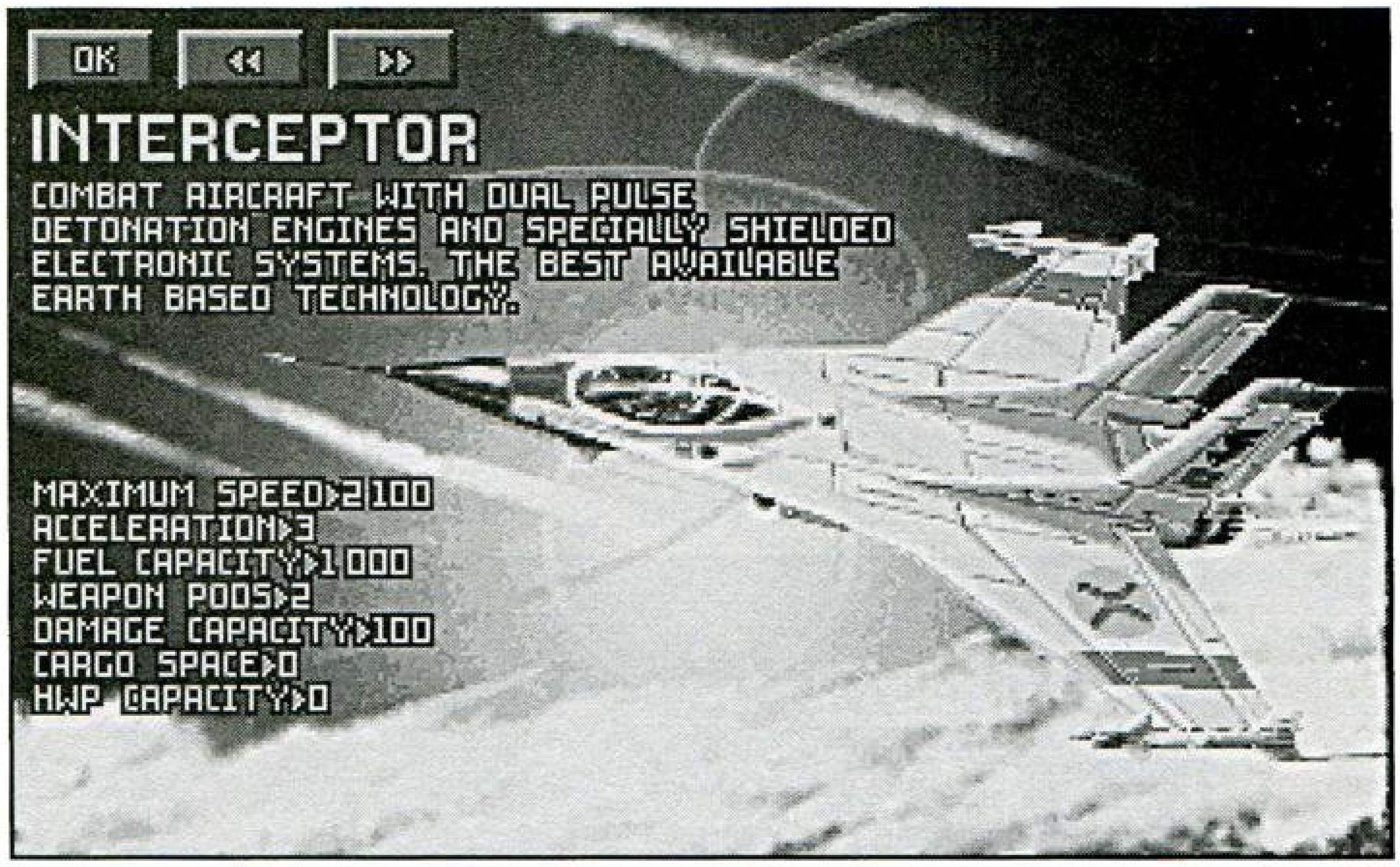
- **Cost:** Cost to buy or produce one weapon
- **Ammo Cost:** Cost for the weapon's ammunition (unless otherwise stated, the cost listed is the cost per round)
- **Engineer-Hours to Produce:** How long it takes your engineers to build one weapon
- **Special Materials Required:** Materials required to manufacture one weapon
- **Work Space Required:** Number of work shop space units required to build one weapon
- **Damage:** Amount of damage inflicted for each successful shot
- **Range:** Weapon's maximum range in kilometers
- **Accuracy:** Base percentage chance for the weapon to hit a target
- **Reload Time:** Amount of time between consecutive shots
- **Maximum Rounds:** Ammunition capacity of the weapon when it's fully loaded

CRAFT

X-COM uses two categories of craft in the game: fighters and transports. *Fighters* are air-to-air combat craft used to intercept and shoot down UFOs. *Transports* are used mostly to transport combat troops to the sites of ground assault missions.

Compared with their advanced counterparts, these two basic craft in the game are very slow and much easier to destroy. They also require that you pay a monthly craft-rental fee equal to the purchase price of each craft.

Interceptor



INTERCEPTOR

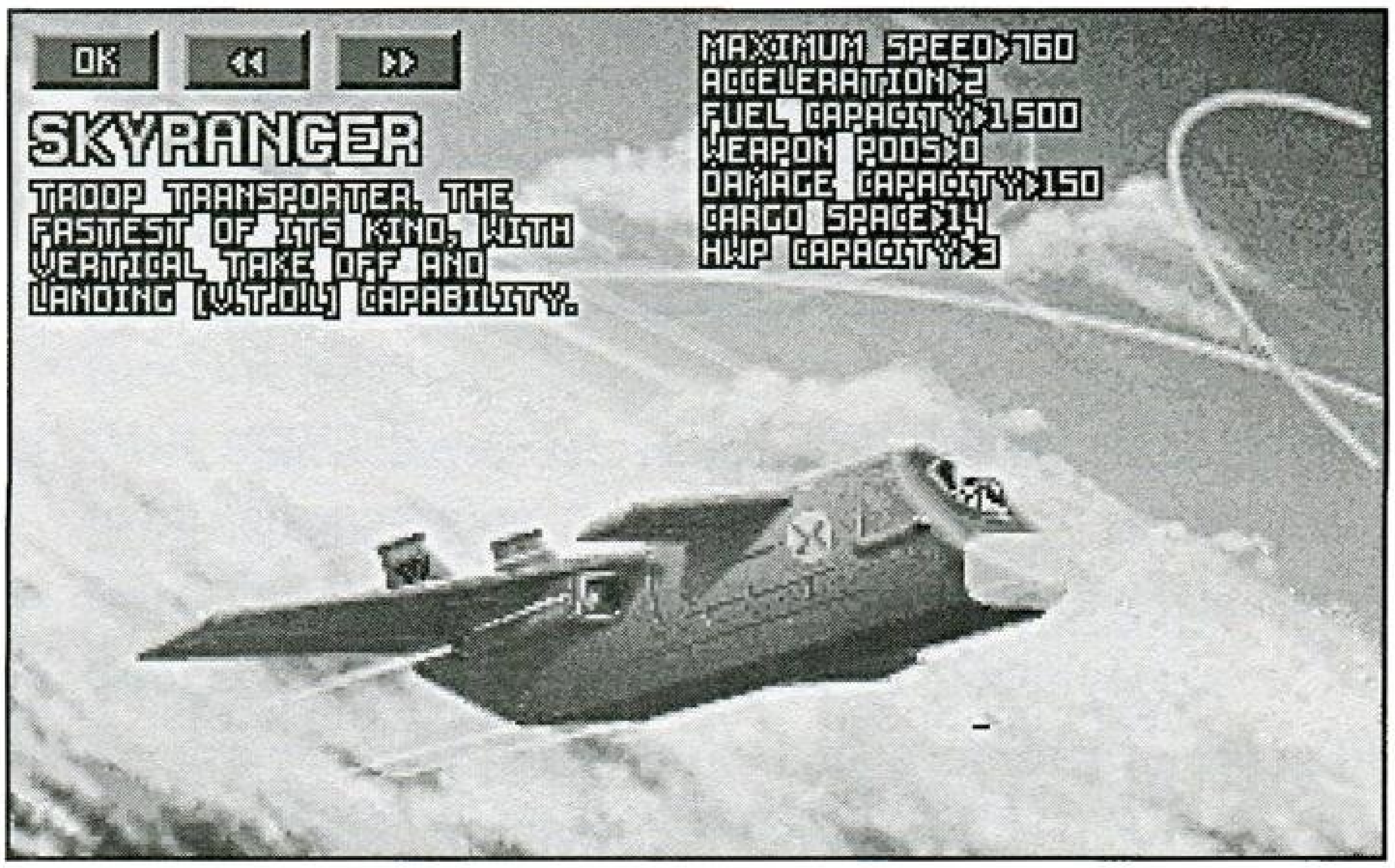
COMBAT AIRCRAFT WITH DUAL PULSE DETONATION ENGINES AND SPECIALLY SHIELDED ELECTRONIC SYSTEMS. THE BEST AVAILABLE EARTH BASED TECHNOLOGY.

MAXIMUM SPEED▸2100
ACCELERATION▸3
FUEL CAPACITY▸1000
WEAPON PODS▸2
DAMAGE CAPACITY▸100
CARGO SPACE▸0
HWP CAPACITY▸0

Craft Type	Fighter
Cost	$600,000
Monthly Rental	$600,000
Maximum Speed	2100 knots
Special Materials Required	None
Engineer-Hours to Produce	N/A
Work Space Required	N/A
Acceleration	3
Fuel Capacity	1000
Weapon Pods	2
Damage Capacity	100
Cargo Space	0
HWP Capacity	0

The *Interceptor* is the best Terran-designed fighter craft available. Its design is visually similar to present-day jet fighters and interceptors. Rather than jet engines, the Interceptor employs dual pulse-detonation engines capable of propelling the craft at speeds nearly as high as Mach 3.2. Its two weapon pods are capable of mounting any air-to-air weapon of either terrestrial or extraterrestrial design. It is powered by conventional Earth fuels.

Skyranger



SKYRANGER

TROOP TRANSPORTER. THE FASTEST OF ITS KIND, WITH VERTICAL TAKE OFF AND LANDING [V.T.O.L] CAPABILITY.

MAXIMUM SPEED>760
ACCELERATION>2
FUEL CAPACITY>1500
WEAPON PODS>0
DAMAGE CAPACITY>150
CARGO SPACE>14
HWP CAPACITY>3

Craft Type	Transport
Cost	$500,000
Monthly Rental	$500,000
Maximum Speed	60 knots
Special Materials Required	None
Engineer-Hours to Produce	N/A
Work Space Required	N/A
Acceleration	2
Fuel Capacity	500
Weapon Pods	0
Damage Capacity	150

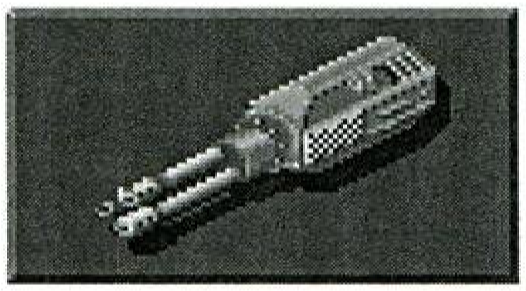
Cargo Space	14
HWP Capacity	3

The Skyranger is a basic transport craft whose outer appearance is visually similar to NASA space shuttles, although it is strictly an atmospheric craft. It is the fastest and most versatile Terran-designed transport, with vertical takeoff and landing capabilities and enough cargo space to carry as many as 14 soldiers or a combination of soldiers and as many as three heavy-weapons platforms. The Skyranger has no air-to-air combat capability. Its engines run on conventional Earth fuels.

AIR-TO-AIR WEAPONS

The basic air-to-air weapons that can be purchased for intercept craft are, like the craft themselves, similar to their present-day counterparts in form and function, but they tend to pack much more power. One weapon system may be mounted on each weapon pod of the craft.

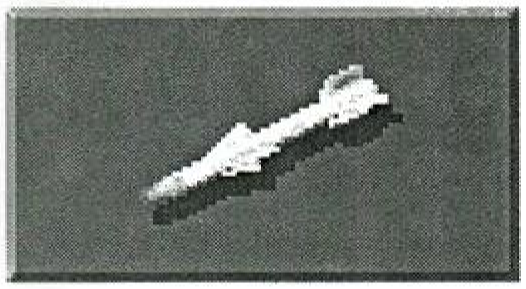
Cannon



Cost	$30,000
Ammo Cost	$1,240 (per 50 rounds)
Special Materials Required	None
Engineer-Hours to Produce	N/A
Work Space Required	N/A
Damage	10
Range	10 kilometers
Accuracy	10 percent
Reload Time	2 seconds
Maximum Rounds	300

A higher-caliber version of the cannon carried by present-day jet fighters, the Cannon is inaccurate but fires at a higher rate of speed than does any other air-to-air weapon. Its short range and low damage potential make this weapon dangerous to use against larger UFOs, but its low ammunition cost makes it attractive for use early in the game (against smaller UFOs).

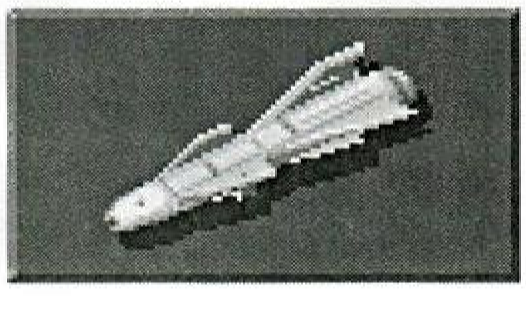
Stingray Missile Launcher



Cost	$16,000
Ammo Cost	$3,000 each
Special Materials Required	None
Engineer-Hours to Produce	N/A
Work Space Required	N/A
Damage	70
Range	30 kilometers
Accuracy	10 percent
Reload Time	15 seconds
Maximum Rounds	6

The Stingray is a medium-range air-to-air missile. Its higher accuracy, combined with its higher damage capacity, make it a much better choice than the cannon for combat with medium-size UFOs. The longer range of this weapon also gives you the opportunity to fire at the enemy from a more discrete distance, making it less likely that you'll be hit by return fire.

Avalanche Missile Launcher



Cost	$17,000
Ammo Cost	$9,000 each
Special Materials Required	None
Engineer-Hours to Produce	N/A
Work Space Required	N/A
Damage	100
Range	60 kilometers
Accuracy	100 percent
Reload Time	20 seconds
Maximum Rounds	3

The Avalanche is a long-range, air-to-air missile. It packs a good punch and is extremely accurate. Unfortunately, it is also slow to reload, carries only three rounds, and is extremely expensive on a per-shot basis. It is the only logical weapon choice, however, when you're faced with an onslaught of large UFOs (at least until you have researched more modern weapons systems), allowing you to stay far enough away to retreat if the battles turn against you.

ADVANCED CRAFT AND AIR-TO-AIR WEAPONS

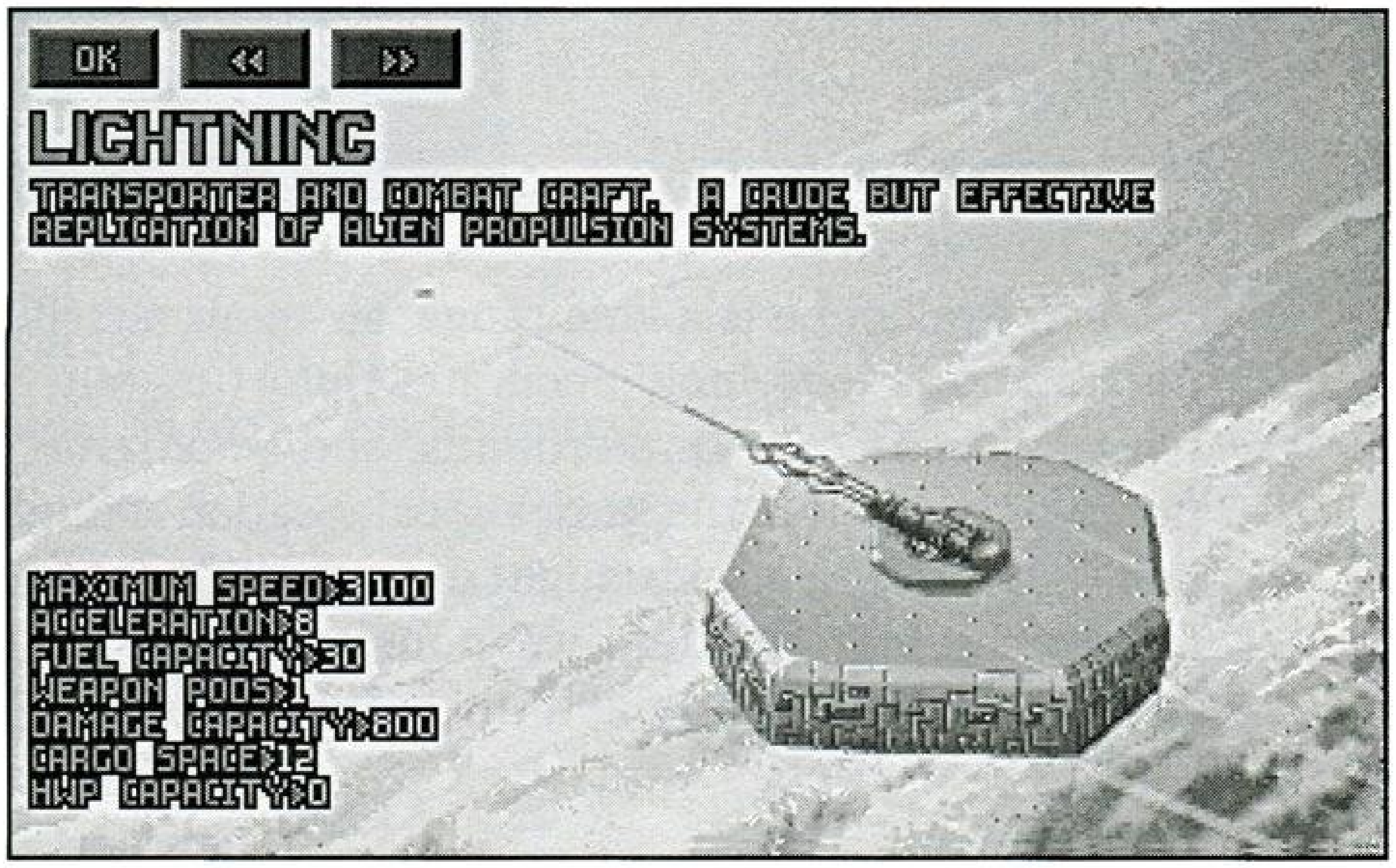
As technology progresses, you have the opportunity to construct faster, more sturdy craft and more powerful weapons from bits and pieces of alien technology. These craft are superior to their basic counterparts in almost every way.

CRAFT

Unlike basic craft, the craft designs based on advanced technology do not require a monthly leasing fee. This, combined with their superior statistics, make these vehicles very important in the game. One thing to keep in mind, however, is that they use Elerium-115 as fuel: You don't want to use this extremely rare element frivolously. You may want to keep an Interceptor and a Skyranger around for light work and use the more advanced craft only when it's absolutely necessary. This advice is especially true of the Avenger, which can use as many as 60 units of Elerium-115 every time you send it out on a mission.

The costs listed for each of these craft do not include the pieces of alien technology (such as alien alloys and UFO power sources) that are also required in order to build them.

Lightning



LIGHTNING

TRANSPORTER AND COMBAT CRAFT. A CRUDE BUT EFFECTIVE REPLICATION OF ALIEN PROPULSION SYSTEMS.

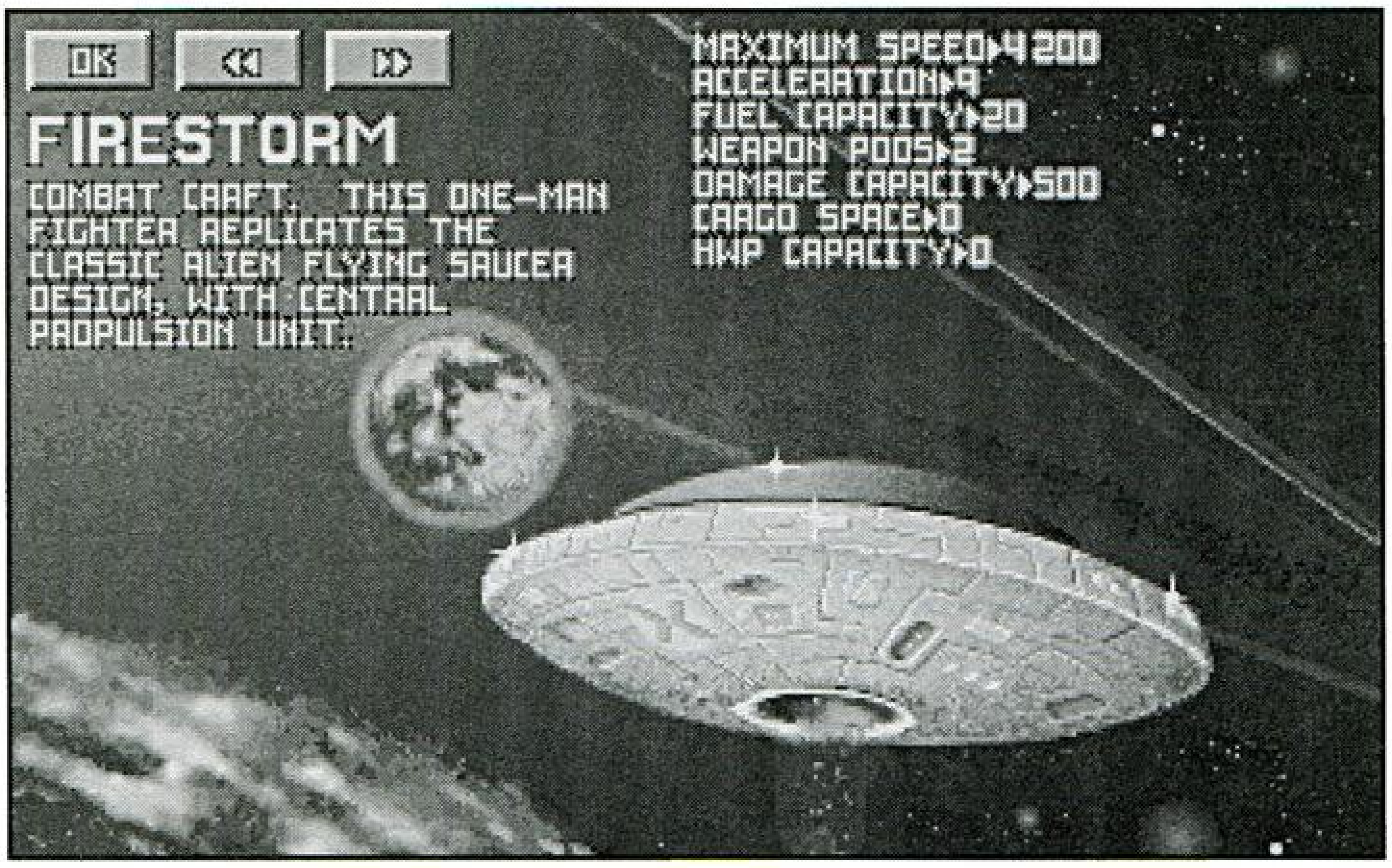
MAXIMUM SPEED>3100
ACCELERATION>8
FUEL CAPACITY>30
WEAPON PODS>1
DAMAGE CAPACITY>800
CARGO SPACE>12
HWP CAPACITY>0

Craft Type	Fighter/transport
Cost	$600,000
Monthly Rental	0
Special Materials Required	Alien alloys (85); UFO power source (1); UFO navigation (1
Engineer-Hours to Produce	18,000
Work Space Required	34
Maximum Speed	3100 knots
Acceleration	8
Fuel Capacity	30 (Elerium-115)
Weapon Pods	1
Damage Capacity	800

Cargo Space	12
HWP Capacity	0

The Lightning is the first, crude imitation of the basic UFO design you can produce. It is perhaps the least effective craft in the game. Although it is significantly faster than an Interceptor, it is ultimately less effective because it can carry only one weapon. And although it can act as a transport for as many as 12 soldiers as well as a fighter, its design precludes the capability to carry HWPs (tanks and hovertanks). It is much more cost-efficient to hold off on building advanced craft until you have the ability to produce the Firestorm.

Firestorm



FIRESTORM

COMBAT CRAFT. THIS ONE-MAN FIGHTER REPLICATES THE CLASSIC ALIEN FLYING SAUCER DESIGN, WITH CENTRAL PROPULSION UNIT.

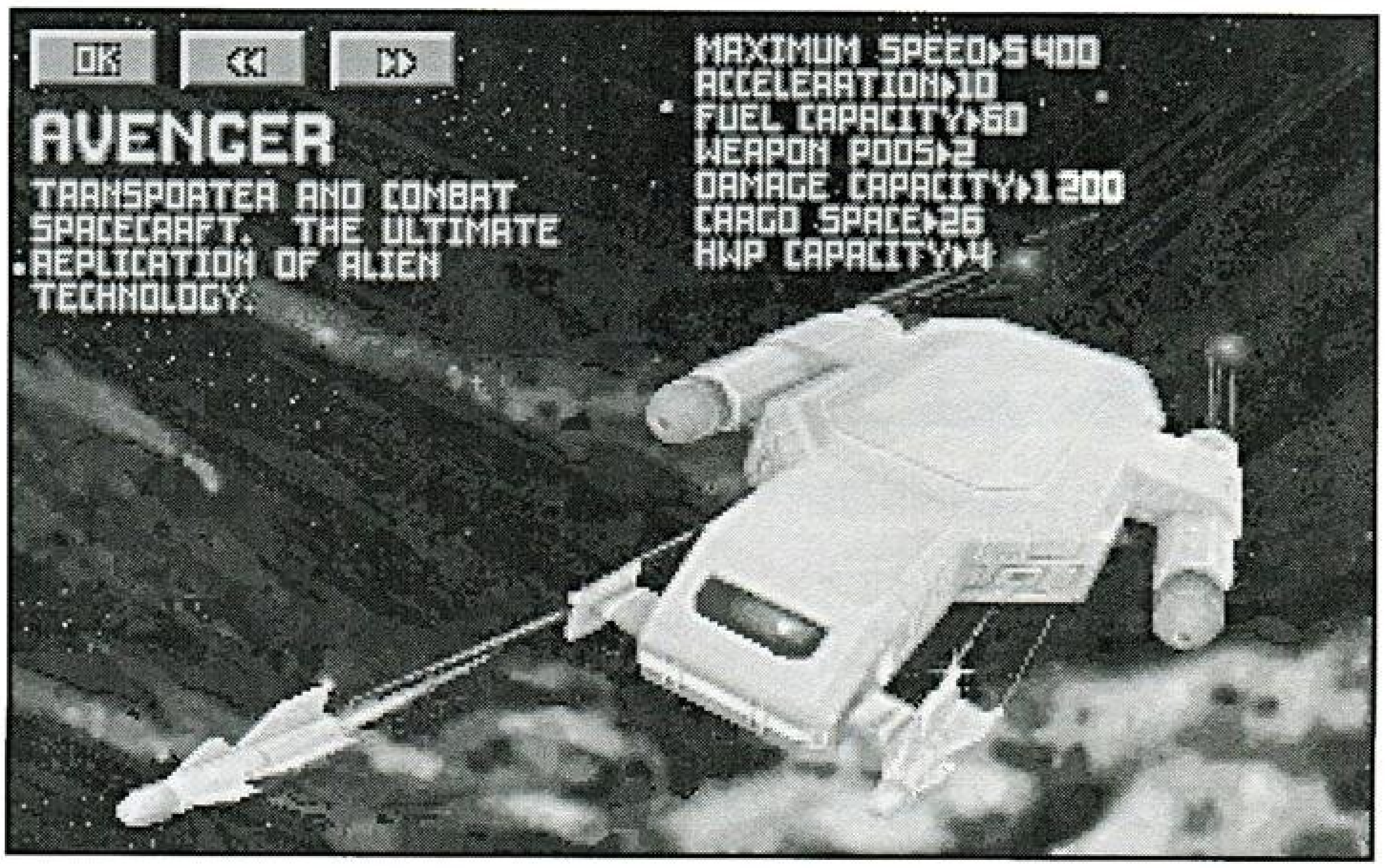
MAXIMUM SPEED▸4200
ACCELERATION▸9
FUEL CAPACITY▸20
WEAPON PODS▸2
DAMAGE CAPACITY▸500
CARGO SPACE▸0
HWP CAPACITY▸0

Craft Type	Fighter
Cost	$400,000
Monthly Rental	0
Special Materials Required	Alien alloys (65); UFO power source (1); UFO navigation (1)
Engineer-Hours to Produce	14,000
Work Space Required	30
Maximum Speed	4200 knots

Acceleration	9
Fuel Capacity	20 (Elerium-115)
Weapon Pods	2
Damage Capacity	500
Cargo Space	0
HWP Capacity	0

The Firestorm is the most advanced fighter craft available in the game. It has many advantages over the basic Interceptor: It is twice as fast and has three times the acceleration and more than three times the damage capacity. And because it is only two-thirds the cost, you can see that this craft is truly the finest available for use as an intercept craft. The only drawback is its use of Elerium-115 for fuel; if it's used wisely, however, it shouldn't be a problem. Just keep an old Interceptor around to do fuel-consuming patrol missions, and leave the heavy interceptions to the Firestorms.

Avenger



AVENGER

TRANSPORTER AND COMBAT SPACECRAFT. THE ULTIMATE REPLICATION OF ALIEN TECHNOLOGY.

MAXIMUM SPEED▸5400
ACCELERATION▸10
FUEL CAPACITY▸60
WEAPON PODS▸2
DAMAGE CAPACITY▸1200
CARGO SPACE▸26
HWP CAPACITY▸4

Craft Type	Fighter/transport
Cost	$900,000
Monthly Rental	0

Special Materials Required	Alien alloys (120); UFO power source (2); UFO navigation (1)
Engineer-Hours to Produce	34,000
Work Space Required	36
Maximum Speed	5400 knots
Acceleration	10
Fuel Capacity	60 (Elerium-115)
Weapon Pods	2*
Damage Capacity	1200
Cargo Space	26
HWP Capacity	4

The Avenger is the most advanced craft of any type available in the game. It combines the speed and weapons power of a fighter with more cargo and HWP capacity than any other transport craft available. Also, it is the only X-COM craft equipped to leave Earth's atmosphere and travel between planets. When you first look at the Avenger's statistics, you might be tempted to get rid of all your other ships in favor of this expensive but versatile craft. But *don't!*

There are a number of reasons not to use the Avenger as an intercept craft: Foremost is that it can use as many as 60 units of Elerium-115 per trip for fuel. Elerium is hard to come by, even in the best of times, and you may find yourself with none left to build such important items as armor and weapons. The other main reason is that if the Avenger is destroyed, so is everything in its cargo bay. In other words, if you go up against an Ethereal Battleship with a cargo hold filled with three HWPs and 12 men and the Battleship destroys you, you lose a fortune in men and equipment rather than just a $400,000 Firestorm. Buy one Avenger for terror-mission suppression and for the trip to Mars, and suppress the urge to use it as an all-purpose craft.

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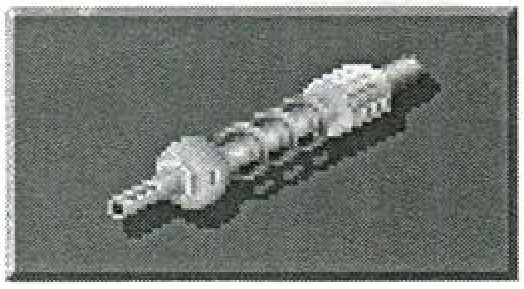
*The Avenger's on-board weapons cannot be used when the craft is on the ground

AIR-TO-AIR WEAPONS

The advanced technology attained by researching advanced technologies and alien artifacts allows for the manufacture of much more sophisticated and effective air-to-air weaponry. Although their technology level is much lower, old Interceptors are capable of mounting any of these advanced weapons systems.

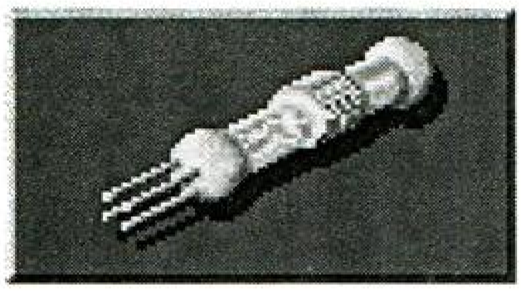
Laser Cannon



Cost	$182,000
Ammo Cost	0
Special Materials Required	None
Engineer-Hours to Produce	300
Work Space Required	6
Damage	70
Range	21 kilometers
Accuracy	70 percent
Reload Time	4 seconds
Maximum Rounds	100

The laser cannon is the ultimate evolution of Terran laser technology. This beam weapon packs the punch of a Stingray missile but with far more rounds, no ammunition cost, and rapid-fire capability second only to the cannon. The laser cannon's short-range power and accuracy, combined with a second, longer-range weapon, make for a good arming combination for an intercept craft.

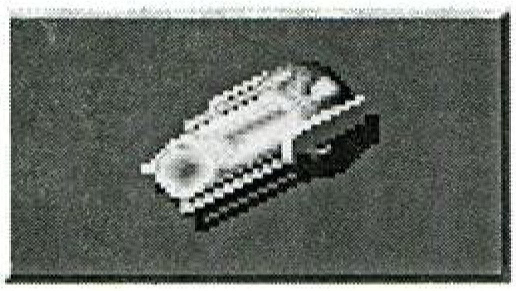
Plasma Beam



Cost	$226,000
Ammo Cost	0
Special Materials Required	Elerium-115 (15)
Engineer-Hours to Produce	500
Work Space Required	8
Damage	140
Range	52 kilometers
Accuracy	140 percent
Reload Time	6 seconds
Maximum Rounds	100

The ultimate evolution of alien plasma technology, the plasma cannon has almost the same range as the Avalanche missile with 40 percent more firepower and accuracy and almost 34 times as many shots (and no ammunition cost!). The plasma cannon, the most practical air-to-air weapon in the game, combines cost effectiveness with the range and firepower to bring down all but the largest UFOs.

Fusion Ball Launcher



Cost	$242,000
Ammo Cost	$28,000
Special Materials Required	None (15 units of Elerium-115 for each round of ammo)

Engineer-Hours to Produce	400
Work Space Required	6
Damage	230
Range	65 kilometers
Accuracy	230 percent
Reload Time	25 seconds
Maximum Rounds	3

The fusion ball launcher is the most powerful, longest-range, most accurate air-to-air weapon available in the game. It is also the most expensive to operate and requires you to expend both Elerium-115 and manufacturing time to produce replacement ammunition.

This weapon is indispensable, however, later in the game, when Ethereal Battleships (the largest UFOs in the game) begin to appear somewhat frequently. The most powerful example of alien fusion weapon technology, the fusion ball launcher fires bombs that combine matter and antimatter to create an implosive reaction. A few shots from a fusion ball launcher, followed by several shots from a secondary weapon (such as a plasma beam), is about the safest way to bring down large enemy craft.

HEAVY WEAPONS PLATFORMS (HWPS)

As a backup for your soldiers and their handheld weaponry, you have the option to purchase or build a variety of armored attack vehicles, known as heavy-weapons platforms, or HWPs. *HWPs* are automated vehicles that are well-protected and that carry powerful weapons systems.

HWPs are useful for scouting ahead in dangerous or unknown situations. Whereas a soldier can easily be killed by a stray shot from a hidden alien, an HWP is likely to absorb the hit. They are also useful for destroying rooms and buildings that house a number of hostile aliens. The most powerful of the HWPs can take out the better part of a small building with a single shot.

HWPs cannot be reloaded in the field. Ammunition is stored at the HWP's home base, and the HWP is automatically reloaded when it returns.

The statistics listed for HWPs are as follows:

- **Cost:** Cost of purchasing or producing one HWP
- **Special Materials Required:** Materials required to manufacture one HWP
- **Engineer-Hours to Produce:** How long it takes your engineers to build one HWP
- **Work Space Required:** Number of work shop space units required to build one HWP
- **Ammo Type:** Type of ammunition used by the HWP
- **Ammo Cost:** Cost for each round of ammunition for the craft
- **Rounds:** Ammunition capacity for the HWP when it's fully loaded
- **Damage:** Amount of damage inflicted by a successful shot
- **Time Units:** Number of time units the HWP has each turn
- **Armor:** Three numbers showing the amount of damage points that can be absorbed before the HWP begins losing health points. The different numbers refer to different areas of the HWP, divided as follows: Front/Left, Right/Rear, and Under
- **Health:** Amount of damage required to destroy the HWP

BASIC HWPS

As with other basic equipment, the basic HWPs are available at the start of the game. Although they lack the power and maneuver ability of some of the more advanced heavy weapons platforms, these HWPs can often serve you well right up to the end of the game.

Tank/Cannon

Cost	$420,000
Special Materials Required	None
Engineer-Hours to Produce	N/A

Work Space Required	N/A
Ammo Type	HWP cannon shells (AP)
Ammo Cost	$200
Rounds	30
Damage	60
Time Units	70
Armor	90/75/60
Health	90

The tank/cannon is the weakest of the HWPs. Its armor-piercing round is capable of killing aliens and knocking down small sections of walls, but its usefulness is based entirely on the weapon's limited accuracy. Although this HWP is less expensive and carries more rounds of ammunition, the tank/rocket launcher is a better choice.

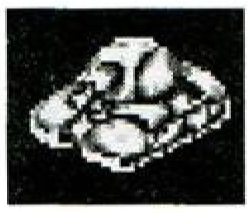
Tank/Rocket Launcher

Cost	$480,000
Special Materials Required	None
Engineer-Hours to Produce	N/A
Work Space Required	N/A
Ammo Type	HWP rockets (HE)
Ammo Cost	$3,000
Rounds	8
Damage	85
Time Units	70
Armor	90/75/60
Health	90

Similar in overall design to the tank/cannon, the tank/rocket launcher is a better value because of the area effect of the damage produced by its high-explosive rocket ammunition. Definitely the HWP of choice in the beginning, it remains a good value throughout the game when compared to the extremely high cost of the only other HWP that uses HE ammunition, the hovertank/launcher.

ADVANCED HWPS

With new technologies comes the ability to construct stronger and faster HWPs which carry more deadly and accurate weapons. Although more expensive than their basic counterparts, the advanced HWPs are worth the extra money and effort to build.



Tank/Laser Cannon

Cost	$500,000
Special Materials Required	None
Engineer-Hours to Produce	1200
Work Space Required	25
Ammo Type	Laser
Ammo Cost	N/A
Rounds	255
Damage	110
Time Units	70
Armor	90/75/60
Health	90

The tank/laser cannon, based on Terran laser technology, is a vast improvement over the basic tank/cannon design. Although its laser-based weaponry lacks the advantage of a high-explosive's area effect, its damage potential and nearly unlimited ammunition make it a powerful weapon. Combine this with a cost that is not much higher than the basic HWP's, and you get a great deal of "bang for the buck."

Hovertank/Plasma

Cost	$850,000
Special Materials Required	Elerium-115 (30); alien alloys (5)
Engineer-Hours to Produce	1400

Work Space Required	30
Ammo Type	Plasma beam
Ammo Cost	N/A
Rounds	255
Damage	110
Time Units	100
Armor	130/130/100
Health	90

Although its weapon has the same damage potential as the tank/laser cannon, the hovertank/plasma has a number of advantages.

First, because it is made of alien alloys, it has much stronger armor. Also, it employs a crude version of UFO propulsion technology to allow the HWP to hover at any height above the ground. This makes the HWP extremely useful as a scouting vehicle, hovering over the Battlescape and observing the situation at hand. Finally, the hovertank/plasma has more time units per turn than the tank/laser cannon does.

Hovertank/Launcher

Cost	$900,000
Special Materials Required	Elerium-115 (25); alien alloys (8)
Engineer-Hours to Produce	1200
Work Space Required	30
Ammo Type	HWP fusion bomb (HE)
Ammo Cost	$15,000 (plus special materials)
Rounds	8
Damage	140
Time Units	100
Armor	130/130/100
Health	90

The hovertank/launcher is the most powerful of the HWPs available. It fires an HWP fusion bomb, which is a smart-missile capable of following as many as nine preset waypoints. This means that the missile can go over, under, or around any obstacles standing between the HWP and its target. When the missile hits, it produces a powerful explosion over a wide area. This HWP also employs the same armor and propulsion systems found in the hovertank/plasma.

Unfortunately, this HWP is extremely expensive to build, costing as much as an Avenger. It is also one of the most expensive weapons to fire, costing more than $16,000 per shot (when you take into account the special materials involved). It is much less expensive to equip a soldier with a flying suit and a blaster launcher (which give him hovering capability and a weapon even more powerful than the HWP), and stick to tank/rocket launchers if you want an HWP that fires high-explosives.

WEAPONS

These weapons comprise the X-COM armory, from which you choose your soldiers' weapons. This section lists statistics and descriptions for each of the weapons available throughout the game. Both the basic and advanced weaponry are divided into two sections: ranged weapons (rifles, pistols, etc.) and other weapons (which includes thrown weapons such as hand grenades, and special weapons such as stun rods).

The statistics listed for ranged weapons are as follows:

- **Cost:** Purchase or manufacture price of the weapon
- **Special Materials Required:** Materials required to manufacture one weapon
- **Engineer-Hours to Produce:** How long it takes your engineers to build one weapon
- **Work Space Required:** Number of work shop space units required to build one weapon

- **Ammunition Type:** Type of ammunition used and the type of damage it inflicts: armor piercing (AP), high-explosive (HE), incendiary (I), laser, plasma, or stun
- **Ammunition Cost:** Purchase price for one unit (clip, rocket, etc.) of ammunition
- **Shots:** Number of shots that can be fired before reloading
- **Damage:** Number of damage points inflicted per hit
- **Accuracy and Time:** Chart showing the weapon's base accuracy for each type of shot (auto, snap, and aimed) and the percentage of the soldier's total time units required to fire each type of shot

The statistics listed for other weapons are as follows:

- **Cost:** Purchase or manufacture price of the weapon
- **Engineer-Hours to Produce:** How long it takes your engineers to build one weapon
- **Special Materials Required:** Materials required to manufacture one weapon
- **Work Space Required:** Number of work shop space units required to build one weapon
- **Timer Delay:** In the case of grenades and explosives, the number of turns you can set the weapon's timer to wait before it explodes
- **Time Units to Prime:** Percentage of a soldier's total time units required to set an explosive's timer
- **Time Units to Throw/Use:** Percentage of a soldier's total time units required to throw or use the weapon
- **Damage Type:** High-explosive (HE) or special damage types as listed
- **Damage:** Number of damage points inflicted by the weapon

All the statistics shown in this chapter are consolidated into two charts in Chapter 8, "Soldiers, Movement, and Combat," which explores the subject of ground combat. Chapter 8 also explains the concepts of base accuracy of weapons and of time units and the movement system.

BASIC RANGED WEAPONS

The weapons available at the start of the game are very similar to those available in the present day. They mostly consist of projectile weapons, self-propelled explosives, and thrown explosives. The following section lists basic ranged weapons.

Pistol

Cost	$800		
Special Materials Required	—		
Engineer-Hours to Produce	—		
Work Space Required	—		
Ammunition Type	Pistol clip (AP)		
Ammunition Cost	$70		
Shots	12		
	Auto	**Snap**	**Aimed**
Accuracy	—	60 percent	78 percent
Time Units	—	18 percent	30 percent

The pistol issued to X-COM soldiers is a slightly more powerful version of the handguns available today. It is a high-powered, semi-automatic pistol that holds a clip of 12 armor-piercing bullets. The pistol's ca[ability to be fired quickly is minor compensation for its poor accuracy.

Rifle

Cost	$3,000
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Ammunition Type	Rifle clip (AP)
Ammunition Cost	$200
Shots	20
Damage AP:	30

	Auto	Snap	Aimed
Accuracy	35 percent	60 percent	110 percent
Time Units	35 percent	25 percent	80 percent

Like the pistol, the rifle is only a slightly more advanced version of the technology employed in high-powered sniper weapons used today. The rifle holds a 20-round clip of armor-piercing shells and is capable of firing three-round bursts in automatic mode. Through use of a laser sight, this weapon is highly accurate when it's aimed.

Heavy Cannon

Cost	$6,400
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Ammunition Type	HC AP/HE/I ammo
Ammunition Cost AP:	$300; HE: $500; I: $400
Shots	6
Damage AP:	56; HE: 52; I: 60

	Auto	Snap	Aimed
Accuracy	—	60 percent	90 percent
Time Units	—	33 percent	80 percent

The heavy cannon is a weapon capable of inflicting devastating damage. Unfortunately, it is very cumbersome, and its bulk slows down the soldier who is using it. Both the high-explosive and the incendiary shells produce an explosion that covers a wide area, making it unnecessary to hit a target directly to damage it. This capability makes the heavy cannon a good choice for soldiers with low weapons accuracy, if they are strong enough to carry it.

Auto-Cannon

Cost	$13,500
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Ammunition Type	AC AP/HE/I ammo
Ammunition Cost AP:	$500; HE: $700; I: $650
Shots	14
Damage AP:	42; HE: 44; I: 48

	Auto	**Snap**	**Aimed**
Accuracy	32 percent	56 percent	82percent
Time Units	40 percent	33 percent	80 percent

The auto-cannon is much like the heavy cannon in terms of versatility and bulk, but it has the capability to fire three-round bursts on automatic. The increased fire rate and ammunition capacity more than compensate for the smaller size and damage capacity of the shells. Like the heavy cannon, when the auto-cannon is loaded with high-explosive or incendiary shells, pinpoint accuracy is less important due to the area effect of the damage.

Rocket Launcher

Cost	$4,000
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Ammunition Type	Small/large/incendiary rockets
Ammunition Cost Small:	$600; large: $900; Incendiary: $1,200
Shots	1
Damage Small (HE):	75; large (HE): 100; Incendiary: 90

	Auto	**Snap**	**Aimed**
Accuracy	—	55 percent	115 percent
Time Units	—	45 percent	75 percent

The rocket launcher's advantages lie in its low cost, huge damage potential, and high accuracy when it's aimed. The drawbacks are its bulk and the cost of its ammunition, and that you are forced to reload after every shot. Still, as the most powerful ranged weapon available to you in the early stages of the game, it is valuable to have around when you embark on terror missions.

OTHER BASIC WEAPONS

Listed below are the thrown explosives and other weapons which are available at the start of the game.

Grenade

Cost	$300
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Timer Delay	0 to 23 turns
Time Units to Prime	50 percent
Time Units to Throw/Use	25 percent
Damage Type	HE
Damage	50

The standard X-COM-issue grenade operates on the same principles as do present-day grenades. The major difference is the inclusion of a variable timer that allows you to accurately program the grenade to explode at a specified time, from 0 turns (explodes at the end of the present turn) to 23 turns (explodes at the end of the 23rd turn following the turn when the timer is set).

Proximity Grenade

Cost	$500
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—

Timer Delay	Special
Time Units to Prime	50 percent
Time Units to Throw/Use	25 percent
Damage Type	HE
Damage	70

Unlike most X-COM grenades, the proximity grenade has no variable timer. Instead, it has a motion-detecting proximity detonator activated by any movement within one square of its position. This grenade is useful when you're laying traps, but be sure to remember where you've thrown it; the detonator cannot discriminate between aliens and X-COM operatives!

High-Explosive

Cost	$1,500
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Timer Delay	0 to 23 turns
Time Units to Prime	50 percent
Time Units to Throw/Use	25 percent
Damage Type	HE
Damage	110

By far the most powerful thrown explosive in the game, high-explosive charges were designed strictly for use in demolition work. However, they do make excellent grenades as well. Because of their bulk, high-explosive charges cannot be thrown as far as grenades can, so you should place the charge and move away; or, if you must throw it, make sure that the timer is set so that all your soldiers are away from the detonation site when the explosion occurs. The relatively high cost of this item, combined with the danger of using it, necessitates that you use it sparingly.

Smoke Grenade

Cost	$150
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Timer Delay	0 to 23 turns
Time Units to Prime	50 percent
Time Units to Throw/Use	25 percent
Damage Type	Smoke
Damage	60

The amount of damage listed for the smoke grenade is misleading because the explosion produces only smoke. This device is not a weapon; it's a defensive device that provides visual cover in exposed areas during combat, forcing the aliens to be much closer to your soldiers in order to see them. The unfortunate side effect is that the smoke screen works both ways, making it more difficult for you to see the aliens.

Stun Rod

Cost	$1,260
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Timer Delay	N/A
Time Units to Prime	N/A
Time Units to Throw/Use	15 TUs
Damage Type	Stun
Damage	N/A

The stun rod operates on the same principle as a present-day stun gun. This weapon delivers a non-lethal electrical charge designed to stun the target rather than do any permanent damage. Because capturing and interrogating aliens are important factors in winning the game, stun weapons are important. The stun rod can be dangerous to use because you have to be adjacent to the target in order for it to work. Stun rods are useful against not only aliens but also X-COM soldiers under alien control. Stunning possessed soldiers keeps them from doing harm to your squad while eliminating the need to kill the unfortunate victim.

ADVANCED RANGED WEAPONS

As research progresses, you are able to produce more accurate and powerful weapons based on advanced technology and alien designs. Listed below are the ranged weapons which become available through continued scientific research.

Laser Pistol

Cost	$8,000		
Special Materials Required	—		
Engineer-Hours to Produce	300		
Work Space Required	2		
Ammunition Type	N/A		
Ammunition Cost	N/A		
Shots	Unlimited		
Damage Laser:	46		
	Auto	**Snap**	**Aimed**
Accuracy	28 percent	40 percent	68 percent
Time Units	25 percent	20 percent	55 percent

Laser pistols are less accurate than a conventional pistol and require slightly more energy to use. These drawbacks are offset, however, by the fact that laser pistols inflict more damage than a conventional rifle does. They are capable of firing three-round bursts on automatic, and they have unlimited ammunition.

The laser pistol is the first weapon that can be researched and built based on the research of laser weapons. This Terran technology is available at the beginning of the game, and it is beneficial to gain this knowledge early in the game, even though laser weapons are generally abandoned fairly quickly in favor of the more powerful and accurate plasma-based weapons.

Laser Rifle

Cost	$20,000		
Special Materials Required	—		
Engineer-Hours to Produce	400		
Work Space Required	3		
Ammunition Type	N/A		
Ammunition Cost	N/A		
Shots	Unlimited		
Damage Laser:	60		
	Auto	**Snap**	**Aimed**
Accuracy	46 percent	65 percent	100 percent
Time Units	34 percent	25 percent	50 percent

A more powerful and accurate weapon, the laser rifle is the next logical step in laser-weapons evolution. Although the laser rifle is slightly less accurate when it's aimed, it edges out its conventional counterpart in automatic and snapshot performance. It also inflicts twice as much damage as a conventional rifle does. The laser rifle is the most practical of the laser weapons for full-scale combat.

Heavy Laser

Cost	$32,000
Special Materials Required	—
Engineer-Hours to Produce	700
Work Space Required	4
Ammunition Type	N/A
Ammunition Cost	N/A
Shots	Unlimited
Damage Laser:	80

	Auto	Snap	Aimed
Accuracy	—	50 percent	84 percent
Time Units	—	33 percent	75 percent

The extra punch carried by the heavy laser makes it the most powerful of the handheld laser weapons. However, the bulk of this weapon (comparable to that of a heavy cannon) and its slow firing rate make it an impractical weapon. Until you have completed research on plasma weapons, stick with the more practical laser rifle.

Plasma Pistol

Cost	$56,000
Special Materials Required	Alien alloys (1)
Engineer-Hours to Produce	600
Work Space Required	3
Ammunition Type	Plasma pistol clip
Ammunition Cost	$2,000 (plus special materials)
Shots	26
Damage Plasma:	52

	Auto	Snap	Aimed
Accuracy	50 percent	65 percent	85 percent
Time Units	30 percent	30 percent	60 percent

The plasma pistol is the smallest weapon available that is based on alien plasma technology. Its blasts carry nearly as much destructive power as a shot from a laser rifle does, but it is not quite as accurate. Other drawbacks, compared to lasers, are its price and the need for ammunition clips.

The plus side, however, is that plasma weapons are the most common weapons used by the aliens. After each successful ground mission, you stand an excellent chance of picking up free plasma weapons and ammunition. Plasma pistols tend to be less popular weapons among the aliens than other plasma-based weaponry are.

Plasma Rifle

Cost	$88,000		
Special Materials Required	Alien alloys (1)		
Engineer-Hours to Produce	820		
Work Space Required	4		
Ammunition Type	Plasma rifle clip		
Ammunition Cost	$3,000 (plus special materials)		
Shots	28		
Damage Plasma:	80		
	Auto	**Snap**	**Aimed**
Accuracy	55 percent	86 percent	100 percent
Time Units	36 percent	30 percent	60 percent

This weapon has the same power as a heavy laser, but with much less bulk, more accuracy, and the capability to fire three-shot automatic bursts. Even more pleasant is that the plasma rifle is more commonly used by alien forces than the plasma pistol, so you have a good chance of picking up several of these weapons and their ammo clips for free. It is an excellent choice for a primary assault weapon.

Heavy Plasma

Cost	$122,000		
Special Materials Required	Alien alloys (1)		
Engineer-Hours to Produce	1000		
Work Space Required	4		
Ammunition Type	Heavy plasma clip		
Ammunition Cost	$6,000 (plus special materials)		
Shots	35		
Damage Plasma:	115		
	Auto	**Snap**	**Aimed**
Accuracy	50 percent	75 percent	110 percent
Time Units	35 percent	30 percent	60 percent

The heavy plasma is the ultimate primary assault weapon in the game. Far less bulky than other heavy weapons, it is the only heavy weapon capable of firing three-round bursts on automatic. It is among the most accurate handheld weapons and (except in the case of auto-shots) costs no more TUs than a plasma rifle does. Its 115 points of damage per shot makes it the second most powerful handheld weapon.

Best of all, cost is no object! The heavy plasma is the preferred weapon of the alien invaders. After a few ground assaults, you'll have more heavy plasmas and clips than you know what to do with!

Small Launcher

Cost	$78,000		
Special Materials Required	Alien alloys (1)		
Engineer-Hours to Produce	900		
Work Space Required	3		
Ammunition Type	Stun bomb		
Ammunition Cost	$7,000 per bomb (plus special materials)		
Shots	1		
Damage Stun:	90		
	Auto	**Snap**	**Aimed**
Accuracy	—	65 percent	110 percent
Time Units	—	40 percent	75 percent

The small launcher is often carried by aliens and used to stun human specimens for live capture. By design, small launchers are useful for X-COM use in stunning aliens for live capture. It is extremely useful to have at least one small launcher along on every mission (after they become available).

The price of stun bombs is high; luckily, small launchers and their ammunition are often found among alien artifacts recovered from successful ground missions.

Blaster Launcher

Cost	$90,000		
Special Materials Required	Alien alloys (1)		
Engineer-Hours to Produce	1200		
Work Space Required	5		
Ammunition Type	Blaster bomb		
Ammunition Cost	$8,000 per bomb (plus special materials)		
Shots	1		
Damage HE:	200		
	Auto	**Snap**	**Aimed**
Accuracy	—	—	120 percent
Time Units	—	—	80 percent

The blaster launcher, a bulky weapon that fires only a single shot between reloads, can be fired only as an "aimed" shot. It boasts the most expensive ammunition in the game, and after a soldier fires it, he can do little else but reload and wait until his next turn.

Despite all this, blaster launchers are the finest available long-range weapons of mass destruction. Blaster bombs are smart-missiles, which follow a series of as many as nine waypoints you choose along the landscape. This way, the missile can go over, under, around, and through just about any obstacle, delivering the most powerful area-effect explosive with unmatched accuracy. It is particularly useful to have one or two of these weapons around during terror missions, base-defense situations, and the final battle on Mars.

OTHER ADVANCED WEAPONS

As the technology for building advanced ranged weapons is expanded, so is the technology for building other weapon types. Below is a list of other weapons based on advanced or alien technology.

Alien Grenade

Cost	$6,700
Special Materials Required	Elerium-115 (2)
Engineer-Hours to Produce	200
Work Space Required	2
Timer Delay	0 to 23 turns
Time Units to Prime	50 percent
Time Units to Throw/Use	25 percent
Damage Type	HE
Damage	90

The alien grenade is just like the Terran equivalent, with the same sort of delay-timer mechanism. Its advantage over conventional grenades is a significantly higher explosive strength.

At first glance, it may seem more sensible to use high-explosive charges than alien grenades because of both cost and damage potential. Like plasma weapons, however, alien grenades are plentiful and can be picked up in bulk for free after most successful ground assaults.

Psi-Amp

Cost	$160,000
Special Materials Required	Elerium-115 (1)
Engineer-Hours to Produce	500
Work Space Required	4
Timer Delay	N/A
Time Units to Prime	N/A
Time Units to Throw/Use	25
Damage Type	Special
Damage	Special

The psi-amp is unlike any other weapon in the game. It amplifies the psionic power of the soldier using it, allowing him to either project feelings of panic directly into an alien's mind or to exert total mind control over the alien, which allows you to control the alien as though he were one of your own soldiers. (When your soldiers panic or fall under alien control, the aliens are using a psi-amp against you!)

Because the psi-amp amplifies latent psionic power in the soldier using it, obviously the soldier must undergo psionic training before using it. The more powerful the soldier's psionic strength, the more of a chance the soldier has of successfully using the psi-amp. No matter what the soldier's psionic strength, an attempt to panic an alien always has more chance of being successful than an attempt to control an alien.

ARMOR

Because X-COM soldiers are up against weaponry far more powerful than anything previously encountered on Earth, some sort of body armor is essential to the survival of your troops. Even with the best armor available, the more powerful alien weapons can cut down a soldier with one lucky shot. With no armor at all, soldiers stand little chance of prolonged survival.

Unfortunately, no Terran material available in 1999 is capable of withstanding alien plasma-based weapons. Therefore, there is no "basic" form of armor. The ability to construct even the most basic armor depends solely on the research and acquisition of the technology of alien alloys. Fortunately, you have the ability to research this technology after your first successful UFO recovery mission. If you research and manufacture strategically, you should be forced to fight perhaps only a half-dozen battles before you develop some form of personal armor.

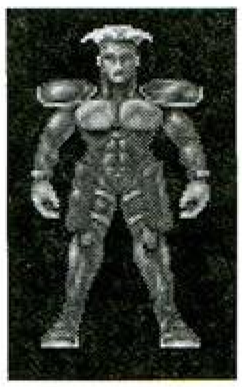
The statistics listed for armor are as follows:

- **Cost:** Manufacturing cost of the armor
- **Special Materials Required:** Materials required to manufacture one suit of armor
- **Engineer-Hours to Produce:** How long it takes your engineers to build one suit of armor

- **Work Space Required:** Number of work shop space units required to build one suit of armor
- **Protection:** Four numbers showing the amount of damage points that can be absorbed by the armor in various areas of the body before the soldier begins losing health points. The amount of protection is shown as follows: Front/Left and Right/ Rear/Under.

TYPES OF ARMOR

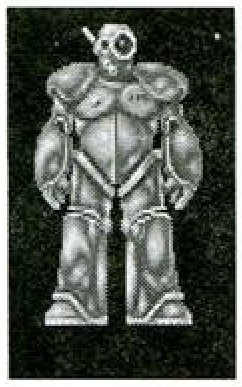
The ability to use armor is acquired through research. Armor is vital; even the most basic type of armor provides considerably more protection for your soldiers than no armor at all. Listed below are all armor types and their characteristics.



Personal Armor

Cost	$22,000
Special Materials Required	Alien alloys (4)
Engineer-Hours to Produce	800
Work Space Required	12
Protection	50/40/30/30

The weakest and most basic type of armor available, personal armor nevertheless provides soldiers with more than five times the resistance to alien weapons fire than they would have wearing no armor at all. With the right research and manufacturing strategy, your engineers can begin producing personal armor early in the game.

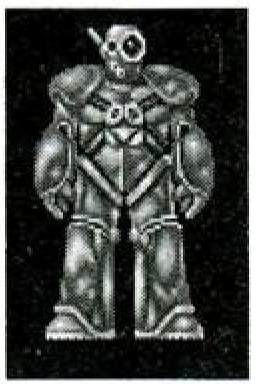


Power Suit

Cost	$42,000
Special Materials Required	Alien alloys (5); Elerium-115 (5)
Engineer-Hours to Produce	1000
Work Space Required	16
Protection	100/80/70/60

With the acquisition of Elerium-115 technology, you can begin to produce power-assisted armor. Power suits provide twice the protection of personal armor, by using a much thicker armor plate. To make up for its bulk, the power suit uses a small amount of Elerium-115 to power a servo-motor system that allows the soldier to move around with the normal agility and dexterity of an unarmored man.

This is the most practical armor available in the game, combining affordable price and excellent protection.



Flying Suit

Cost	$58,000
Special Materials Required	Alien alloys (5); Elerium-115 (16)
Engineer-Hours to Produce	1400
Work Space Required1	6
Protection	110/90/80/70

The flying suit is the most advanced armor available. It starts with the basic structure of the power suit and adds about 10 percent more armor protection. Attached to this suit is an Elerium-115-powered motive system that allows a soldier to hover and fly at any level above the ground.

The advantages of flight capabilities unfortunately don't outweigh the huge Elerium-115 investment required for each suit; unless you have a huge Elerium-115 stockpile, it is impractical to equip all your troops with flying suits. The best strategy is to equip the bulk of your soldiers with power suits and build a few flying suits for key members of each strike team to allow for reconnaissance and other duties that would be assisted by flight capability.

MISCELLANEOUS EQUIPMENT

A number of items available in the game don't fall under any particular category. Information and statistics on these items are available here.

The statistics listed for miscellaneous equipment are as follows:

- **Cost**: Purchase or manufacturing cost of the item
- **Special Materials Required:** Materials required to manufacture the item
- **Engineer-Hours to Produce:** How long it takes your engineers to build the item
- **Work Space Required:** Number of work shop space units required to build the item
- **Time Units:** Number of time units, or percentage of a soldier's total time units, required to use the item

BASIC EQUIPMENT

In addition to weaponry, there are a number of other important pieces of equipment available throughout the game. Only one of these is actually available at the start of the game, and it is shown in this section.

Electro-Flare

Cost	$60
Special Materials Required	—
Engineer-Hours to Produce	—
Work Space Required	—
Time Units	25 percent

The electro-flare is a high-powered, portable light source, capable of lighting up a sizable area of darkened terrain. To ignite the flare, simply throw it. It ignites automatically when it hits the ground.

Electro-flares are extremely useful on night missions, greatly reducing the possibility of being surprised by aliens hiding in the shadows. You should also have a number of them along on the final mission to Mars, where it is always dark.

ADVANCED EQUIPMENT

Advanced technology leads not only to better weaponry, but to high-tech utility equipment as well. Listed in this section is the non-combat equipment which becomes available to Xcom through advanced and alien research.

Medi-Kit

Cost	$28,000
Special Materials Required	—
Engineer-Hours to Produce	420
Work Space Required	4
Time Units	10

The evolution of healing technology in 1999 has advanced to the point where it is accessible to people other than just doctors. The medi-kit is a portable diagnostic and healing device, capable of scanning an injured person, pinpointing all injuries, and administering treatment with just the touch of a few buttons. (For details on the use of the medi-kit, see Chapter 8, "Soldiers, Movement, and Combat.")

Medi-kit technology is available for immediate research at the beginning of each game.

Motion Scanner

Cost	$34,000
Special Materials Required	—
Engineer-Hours to Produce	440
Work Space Required	4
Time Units	25 percent

The motion scanner uses a variety of sophisticated detecting devices and advanced algorithms to locate any moving beings within a certain radius. The scanner's screen displays the detection radius, centered on the soldier using the device. Moving units (alien and friendly) show up as green blips on the screen. (For details on operation of the motion scanner, see Chapter 8, "Soldiers, Movement, and Combat.")

Motion scanner technology is available for research at the beginning of each game.

Mind Probe

Cost	$262,000
Special Materials Required	Elerium-115 (1)
Engineer-Hours to Produce	1200
Work Space Required	4
Time Units	50 percent

Technically speaking, the mind probe is actually an alien artifact, not a normal piece of equipment. It acts as a piece of equipment, however, so it is described here.

The mind probe is an alien communications device that scans a target's brain waves and extracts information. The practical use of this device is to use it during combat. Used on an alien, the probe displays all the alien's vital statistics (health, morale, firing accuracy, etc.). This device is extremely useful for targeting attacks, allowing you to target more soldiers on stronger aliens and fewer soldiers on weaker ones.

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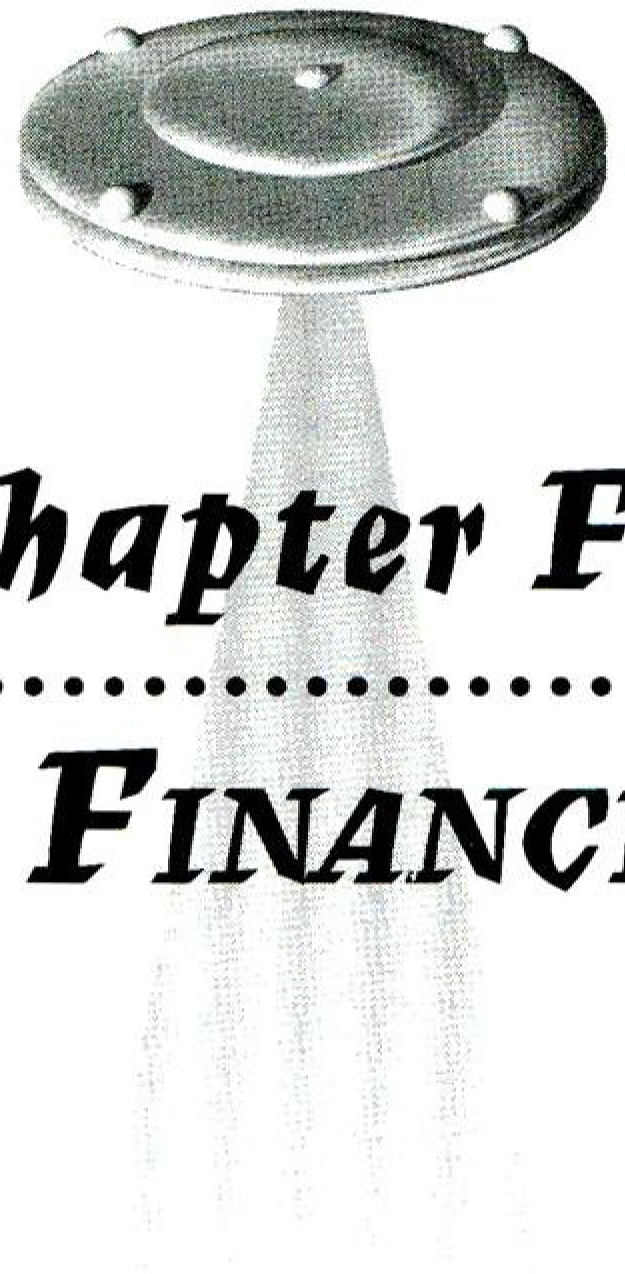


Chapter Five

FINANCE

The unification of all world governments to fight a common foe is certainly a noble effort. No international efforts before the formation of X-COM have even come close to the level of cooperation required to form such an organization.

Nobility and cooperation are great, but these things alone cannot create and build an effective military organization. At best, nobility and cooperation get you a peace rally or a three-day music festival in a muddy field. To build a military force that has any chance of keeping invading aliens from taking over the planet, you need one other, more tangible element from all the participants:

Money. A *large amount* of money.

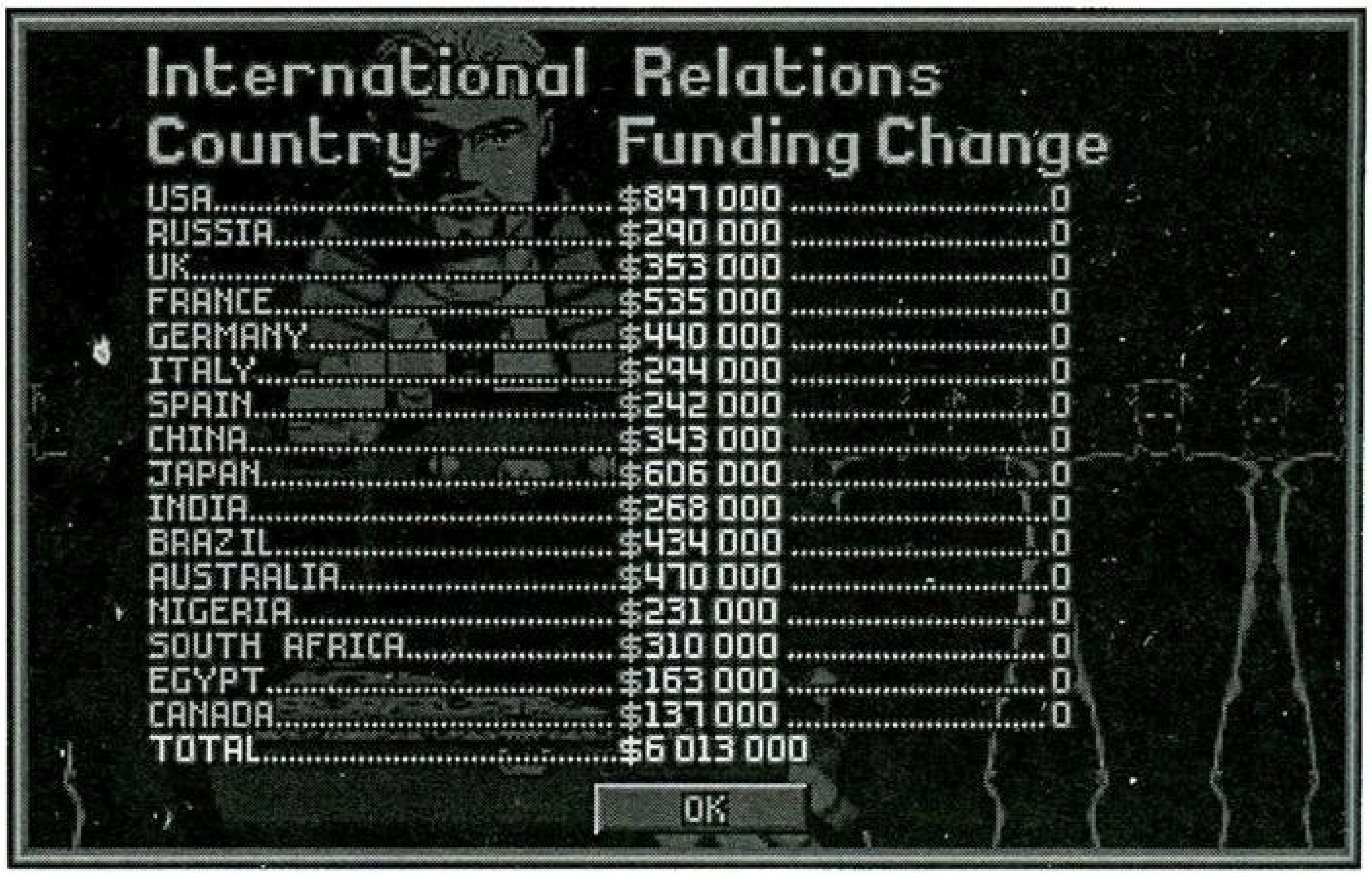
Luckily, all the nations who are participants in the X-COM project are more than happy to invest some of their people's hard-earned tax dollars, pounds, francs, rubles, and pesos in the interest of keeping the planet a little safer. But as with any investment—past, present, or future—the initial cash comes in based on speculation. If you want the cash to continue flowing, you have to show results to convince the investors that their money would not be better spent on some other cause.

This chapter teaches you what you need to do to keep your investors happy. It also explores some strategies you can use to make extra money to supplement your income or to make up for investors who become unhappy and withdraw their support from the X-COM project.

CONTRIBUTIONS

X-COM's primary funding comes from the monthly contributions of the nations of the world. These contributions vary from country to country, and in each game the contributions may be slightly different. Contributions at the beginning of the game are between $4 million and $5 million a month. Figure 5-1 shows the contributions from each nation at the beginning of a typical game.

The amount of money received each month does not remain constant. The participating nations reevaluate their contributions on a monthly basis, based on a number of factors. The system used to calculate a country's monthly change in funding to the X-COM project is as follows:



International Relations

Country	Funding	Change
USA	$897 000	0
RUSSIA	$290 000	0
UK	$353 000	0
FRANCE	$535 000	0
GERMANY	$440 000	0
ITALY	$294 000	0
SPAIN	$242 000	0
CHINA	$343 000	0
JAPAN	$606 000	0
INDIA	$268 000	0
BRAZIL	$434 000	0
AUSTRALIA	$470 000	0
NIGERIA	$231 000	0
SOUTH AFRICA	$310 000	0
EGYPT	$163 000	0
CANADA	$137 000	0
TOTAL	$6 013 000	

Figure 5-1
Typical Monetary contributions at the beginning of a game.

Alien activity in the country + (overall alien activity/5)

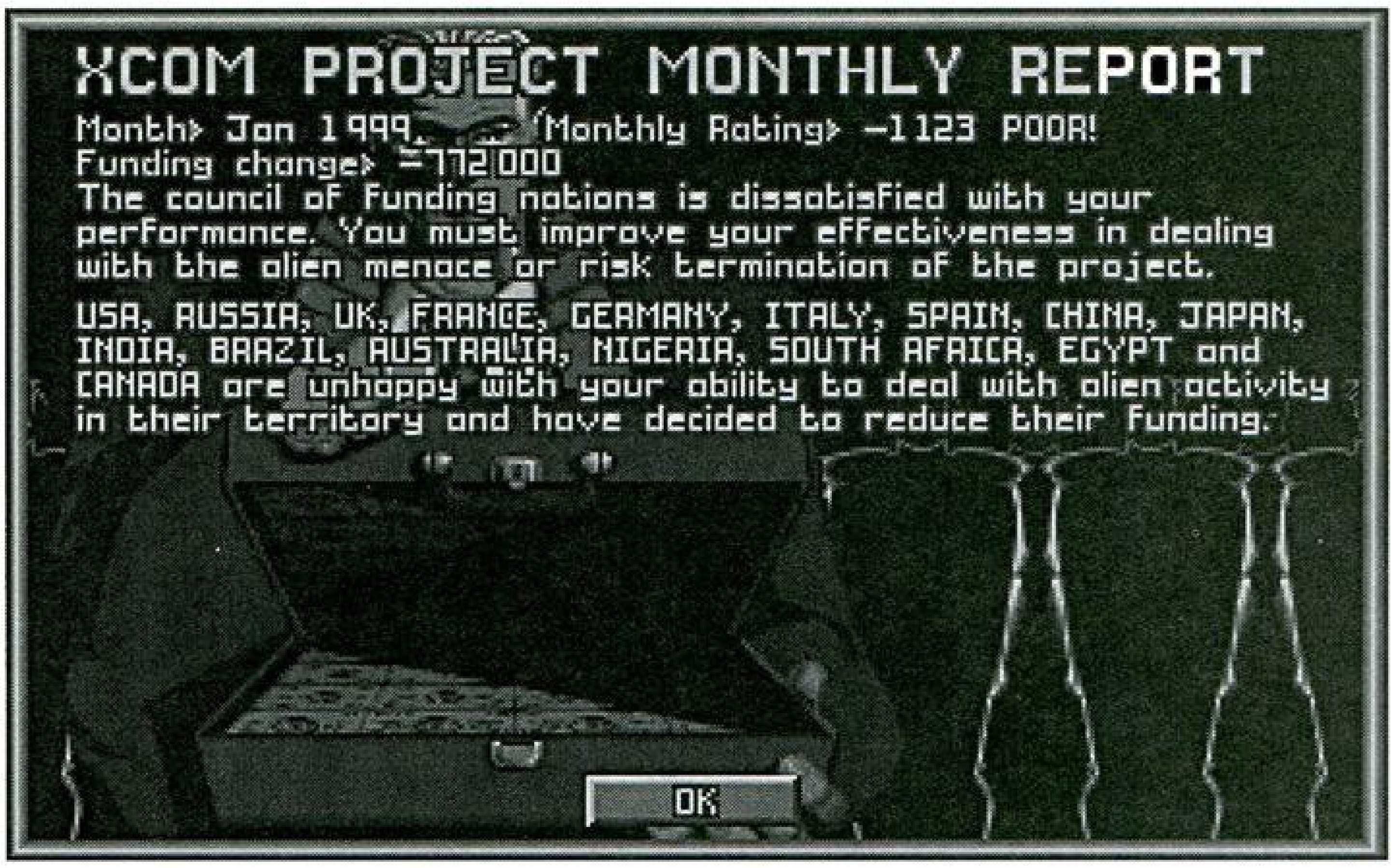
This calculation is compared to the following:

X-COM activity in the country + (overall X-COM activity/10)

Activity "in the country" is the amount of activity taking place inside the contributing country. "Overall" activity is the amount of activity taking place worldwide. UFO activity includes UFO fly-overs, landings, and abductions. X-COM activity includes research, UFO interceptions, and ground assaults.

These two values are compared by all contributing countries at the end of each game month. If the X-COM activity value is higher for a given nation, that country increases its funding by a random amount up to 20 percent of its current level of funding. If the alien activity value is higher, the country decreases its contribution by a random amount up to 20 percent of its current level of funding.

Changes in funding are shown at the end of each game month in the X-COM Project Monthly Report screen, shown in Figure 5-2. This window shows the month, X-COM's monthly rating (score), any increases and decreases in funds, and a brief explanation for the funding changes.


XCOM PROJECT MONTHLY REPORT

Month> Jan 1999. Monthly Rating> -1123 POOR!
Funding change> -772000
The council of funding nations is dissatisfied with your performance. You must improve your effectiveness in dealing with the alien menace or risk termination of the project.

USA, RUSSIA, UK, FRANCE, GERMANY, ITALY, SPAIN, CHINA, JAPAN, INDIA, BRAZIL, AUSTRALIA, NIGERIA, SOUTH AFRICA, EGYPT and CANADA are unhappy with your ability to deal with alien activity in their territory and have decided to reduce their funding.

Figure 5-2
The X-COM Project
lonthly Report screen.

MONITORING X-COM AND UFO ACTIVITY

Because the amount of activity of X-COM and alien forces worldwide plays such a pivotal role in your level of funding, it is a good idea to keep track of this activity throughout the month rather than wait for the monthly report. You can monitor activity status by clicking the Graphs option on the Geoscape screen.

As explained in Chapter 2, "The Geoscape Screen," the Graphs option gives you easy access to statistics about UFO and X-COM activity in areas and countries. Study these graphs from time to time throughout the course of each month. If you see an increase in UFO activity in a country contributing large amounts of money to the project, make sure that you increase X-COM activity in that country. Or if you see that X-COM activity has been particularly heavy in a country contributing little money to the effort, make an effort to shift activity to a more profitable area.

Periodically consulting the graphs greatly lessens the chance of being unpleasantly surprised when cash flow dries up at the end of the month.

THE FINANCIAL CONSIDERATIONS OF BASE LOCATION

The funds contributed by the countries of the world are reevaluated on a monthly basis. The amount given to the X-COM project is directly affected by the overall effectiveness of X-COM's capability to deal with the alien threat within each country. As shown earlier, countries that are happy with X-COM's performance may increase their monthly donation, and those who are unhappy may decrease their donation or cut off funding altogether.

Information regarding the amount of money contributed by each country cannot be accessed in the game until after the first base is built. However, the wealth of the individual nations of the world relative to one another is the same in every game. Table 5-1 lists all contributing X-COM countries, ranked in order by wealth.

This information should be one of the primary deciding factors in choosing the location of your bases. Choosing a location based on a percentage of its original contribution. A 5 percent increase in

Table 5-1 Countries of the world listed in order by wealth

1.	USA
2.	Japan
3.	France
4.	South Africa
5.	Germany
6.	China
7.	Brazil
8.	Russia
9.	Australia
10.	UK
11.	Nigeria
12.	Egypt
13.	India
14.	Italy
15.	Spain
16.	Canada

funding from Japan is proportionally a much larger increase than a 5 percent increase from Spain because Japan contributes significantly more money from the beginning.

Certainly it is preferable to cover as much territory as possible, and the less wealthy nations should definitely not be ignored. But if you must be limited (and you are, especially at the beginning of the game), limit your coverage to countries willing to pay you well for it. If you elect the noble approach, you can just sit back and watch your cash flow quickly dry up as you continue to protect countries contributing limited funds while allowing larger contributors to be ravaged by aliens.

If countries are ignored for several months at a time, they not only cut off X-COM funding but also may form an alliance with alien forces. After a country begins working with the aliens, there is no way to get their funding back, even if you begin to defend that country from UFOs. Again, it is better to lose Spain's $109,000 contribution forever than to lose Japan's $727,000!

INCOME AND EXPENDITURE

Just as important as keeping the contributions flowing is the management of X-COM expenditures. Just about everything in the game costs money. In addition to the cost of manufacturing or purchasing new equipment and facilities, you have many expenses to deal with in the ongoing operation of X-COM. These expenses include monthly maintenance of base facilities; salaries for soldiers, scientists, and engineers; and the maintenance, refueling, and repair of X-COM craft.

The Graphs option on the Geoscape screen allows you to access a graph that tracks the income, expenditures, and maintenance charges associated with the overall operation of X-COM worldwide. These graphs are explained in Chapter 2, "The Geoscape Screen." Frequent consultation of these graphs gives you a good picture of the ongoing cost of the operation.

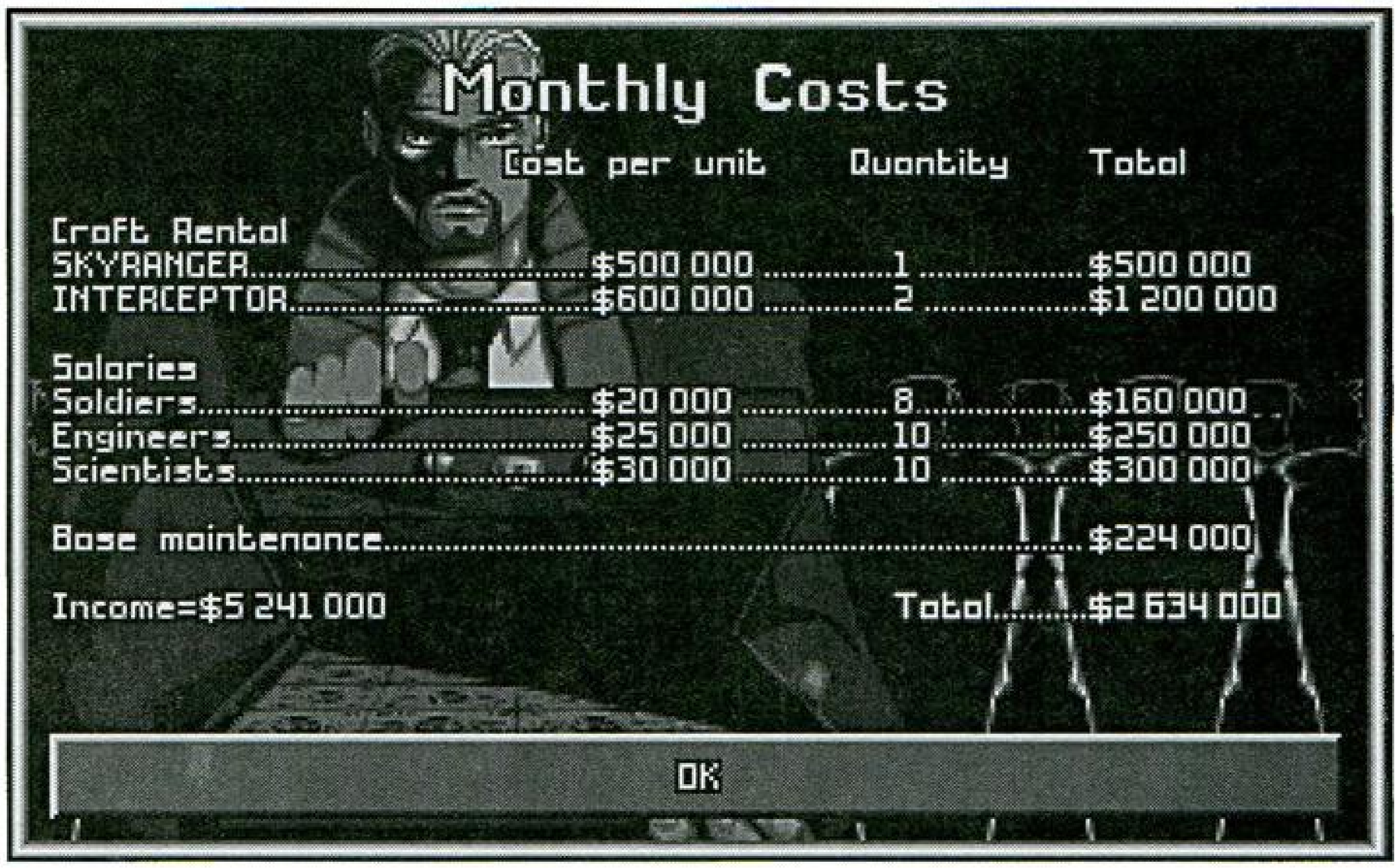
There is also a way to monitor the monthly costs associated with each individual base. From the Bases screen, click the Base Information button. When the Base Information screen appears, click the Monthly Costs button. This action displays the monthly cost for the operation of the chosen base, broken down into categories (see Figure 5-3).

Some expenses are unavoidable, and some can be trimmed significantly or removed.

Expenses that cannot be avoided are the maintenance costs of base facilities currently in use, the costs of necessary purchases and manufacturing, and the monthly salaries of personnel who are actively contributing to the project.

Examples of expenses that can be avoided are shown in this list:

- **Replace rental vehicles:** X-COM does not purchase the Skyranger and Interceptor craft, but rather leases them on a monthly basis. The cost of each craft is subtracted each month from your income. The way to avoid this expense is to replace your Skyrangers and Interceptors with new craft as soon as you



Monthly Costs

	Cost per unit	Quantity	Total
Craft Rental			
SKYRANGER	$500 000	1	$500 000
INTERCEPTOR	$600 000	2	$1 200 000
Salaries			
Soldiers	$20 000	8	$160 000
Engineers	$25 000	10	$250 000
Scientists	$30 000	10	$300 000
Base maintenance			$224 000
Income=$5 241 000		Total	$2 634 000

Figure 5-3
A Display showing the monthly expenses for an X-COM base.

can. The new craft—Lightning, Firestorm, and Avenger—have a one-time construction cost and do not require you to pay a monthly fee.

- **Eliminate unnecessary personnel:** Personnel who sit idle in a base are a waste of money. Every soldier, scientist, and engineer is paid a monthly salary, and this money is subtracted from your monthly income whether the person is working or not.

  Make sure that all personnel have something to do at all times. Sack any soldiers not assigned to a landing craft or transfer them to another base where there is work to be done. If you have completed all important research in the game, there is no need to pay more than 100 scientists to sit around idle. Sack all but about 20. Finally, employ only enough engineers to complete necessary manufacturing tasks in a reasonable amount of time.

  Remember that it takes only a day or two for new personnel to arrive when you hire them. If you have a manufacturing or research project that must be done in a hurry, therefore, you can always put your minimal staff of engineers or scientists on the project and hire some more. When the reinforcements arrive, they can help complete the project quickly. Then, before the end of the month, sack the extra personnel so that you don't have to pay them again. This form of "contract labor" can end up saving you a great deal of money.

- **Limit the number of bases you establish:** The game allows you to establish as many as eight bases, but this number can be prohibitively expensive. Remember that each base facility requires a monthly maintenance fee. Build only the number of bases you need in order to effectively cover the richest and most populated areas of the world.
- **Eliminate unused base facilities:** If you have buildings at a base that are no longer in use, dismantle them. You can do this by clicking on the facility from the Bases display. Examples of unnecessary facilities include hangars with no craft assigned to them, unused laboratories and work shops, unused alien-containment modules, and outdated detection systems. Remove any such facilities when they are no longer needed.

ALTERNATIVE FINANCING

You can make money in ways other than waiting for contributions from the countries of the world. These alternative forms of income can act as a huge supplement to X-COM funding or as a substitute for a funding nation that has decreased or cut off its funding because of unhappiness with X-COM's performance.

HAVING A "GARAGE SALE"

One of the major problems you run into as the game progresses is continually running out of space to store items collected during ground assaults. At the end of each ground assault, you are automatically given everything that was left intact, including aliens (alive and dead); weapons and ammunition; alien artifacts and equipment; and the hull and components of UFOs.

Much of the collected materials are useful and, at first, quite important to game progress. The advance of your scientific research depends on the collection of these items. X-COM soldiers can use the weapons and equipment, and X-COM engineers can use the components and materials to construct items based on alien technology.

However, after all the research is completed, your soldiers have all the alien weapons and equipment they can use, and production has slowed down, the flotsam and jetsam collected on ground assault missions continues to flow in. Eventually it becomes necessary to build more general-stores modules just to hold the stuff. When you experience this situation, it's time to have a garage sale.

Click the Sell/Sack option on the Bases screen. This step displays a list of the items stored at your base. From here, it is easy to see just how much junk is piling up. With the exception of personnel and the two basic X-COM craft, all items in the game can be sold for a profit to some undisclosed entity. Selling unused items not only improves your financial status but also clears out valuable storage space.

The following items are prime candidates to be sold at an X-COM "garage sale:"

- **Old weapons and ammunition:** Sell all outdated weapons and ammunition as soon as you have something better to replace them. This old equipment doesn't command a high price, but any amount of money is more useful than unused weapons.
- **Alien weapons and ammunition:** Keep enough weaponry and ammunition to fully equip your soldiers, and keep a few extra in reserve. Then sell the rest. Plasma weapons and ammunition pile up fast because they are the weapons of choice for nearly all the aliens. These alien weapons can be sold for a large amount of money.
- **Alien corpses:** Except for alien weapons, alien corpses pile up faster than any other item in the game. Only one corpse from each alien species is necessary for study by your scientists. The rest of the corpses serve absolutely no purpose.

  Keep one corpse from each alien race and sell the rest. Then, after your scientists have studied all the species, sell every corpse you have. Not only does there seem to be an endless supply of the things, but there is also an endless demand for them from the "mystery buyer," who purchases all items sold. Corpse sales are a healthy source of constant, supplementary income.

- **Alien devices:** This category includes such items as alien surgery, alien food, and alien entertainment. These items are also collected after every ground assault, and, like everything else, they quickly begin to pile up.

  Treat these devices in the same way as alien corpses. Keep one of each device for your scientists to study and then sell the rest. Then, after research has been completed on each one, sell every device your soldiers collect. Again, these items command a fairly high price on the "mystery market" and are an excellent source of extra cash.

- **UFO components:** This category includes the alien alloys used to construct UFO hulls as well as separate controls and components like UFO navigation and UFO power sources.

  You have to be more careful about selling these items. For example, alien alloys are an important part of the construction of not only advanced X-COM craft but also other items. Although they can be reproduced by your engineers, there is no need to do so if you have obtained plenty of the material for free. You should always keep some alien alloys on hand. If you have a huge surplus, selling some of this material can be somewhat profitable.

  UFO navigation and power sources are used in the construction of advanced X-COM craft. If you are planning to build more craft in the future, make sure that you keep enough of each component to construct the craft. Otherwise, you are forced to pay to have these items produced by your engineers. When you have more of these items than you need, the excess items can be sold for a healthy profit.

  The only item it is not advisable to sell is Elerium-115. This rare element is used to power everything from X-COM craft and weaponry to power suits and mind probes. No matter what your financial situation, you should hold on for dear life to your Elerium and never consider wasting it or selling it.

DEALING IN ARMS AND OTHER COMMODITIES

From time to time throughout the course of history, the normal sociopolitical morality generally practiced by organizations and countries throughout the world tends to fall by the wayside. In these situations, people who would normally never do anything to promote the spread of war just to turn a profit become traders in the trappings and hardware of war for purposes known only to themselves. Never is this as true as when the Earth is being invaded by hostile aliens.

If you find that you are continually trying to make ends meet each month, try going into business as an arms dealer. The same "mystery market" that has an endless need for alien equipment and corpses also has an endless need for weapons. The purpose behind the weapons purchases remains just as much of a mystery as what someone would do with 200 Sectoid corpses. Of course, that is not really a concern. The point is that someone is willing to give you money in exchange for weapons.

Begin by building extra work shops and hiring extra engineers. Choose an item (a craft weapon, such as a laser cannon) and have these engineers begin producing them. The cost to produce each laser cannon is $182,000.

When production is complete, choose the Sell/Sack option from the Bases screen and scroll down to the laser cannon. The market value for this weapon is $211,000. That means that you make a profit of $29,000 for every laser cannon you sell!

This method is a wonderful way to supplement your income as necessary, and it works especially well with items that do not require any special materials to build. All that is required is some initial investment capital, a group of engineers, and enough work space to construct the items. The profit margin for items requiring special materials is offset by the use of the materials. Table 5-2 lists all manufactured items in the game, the cost to produce them, the selling price of each item, and the profit gained through the sale of each.

DEBT

It is important that you at least break even every month. Every month you are in debt (that is, you have a negative budget) is a month in which you must forgo buying new supplies and weapons

Table 5-2 Profit margins for the sale of manufactured items

Item	Cost Per Unit	Selling Price	Profit From Sale
Alien Alloys	$3000	$6500	$3500
Alien Grenade	$6700	$14,850	$8150
Blaster Bomb	$8,000	$17,028	$9028
Blaster Launcher	$90,000	$144,000	$54,000
Flying Suit	$58,000	$115,000	$57,000
Fusion Ball	$28,000	$53,300	$25,300
Fusion Ball Launcher	$242,000	$281,100	$39,000
Heavy Laser	$32,000	$61,000	$29,000
Heavy Plasma	$122,000	$171,600	$49,600
Heavy Plasma Clip	$6000	$9590	$3590
Hovertank/Launcher	$900,000	$1,043,000	$143,000
Hovertank/Plasma	$850,000	$980,000	$130,000
HWP Fusion Bomb	$15,000	$31,500	$16,500
Laser Cannon	$182,000	$211,000	$29,000
Laser Pistol	$8000	$20,000	$12,000
Laser Rifle	$20,000	$36,900	$16,900
Medi-Kit	$28,000	$46,500	$18,500
Mind Probe	$262,000	$304,000	$42,000
Motion Scanner	$34,000	$45,600	$11,600
Personal Armor	$22,000	$54,000	$32,000
Plasma Beam	$226,000	$267,300	$41,300
Plasma Pistol	$56,000	$84,000	$28,000
Plasma Pistol Clip	$2000	$4400	$2400
Plasma Rifle	$88,000	$126,500	$38,500
Plasma Rifle Clip	$3000	$6290	$3290
Power Suit	$42,000	$85,000	$43,000
Psi-Amp	$160,000	$194,700	$34,700
Small Launcher	$78,000	$120,000	$42,000
Stun Bomb	$7000	$15,200	$8200
Tank/Laser Cannon	$500,000	$594,000	$94,000
UFO Navigation	$150,000	$80,000	-$70,000
UFO Power Source	$130,000	$250,000	$120,000

for your soldiers and craft. The farther you fall into debt, the more difficult it is to get out again.

Also, one of the ways you can lose the game is associated with being in debt. If X-COM remains in debt over $1 million for two consecutive months, the project is canceled and the game is over.

If you keep your budget balanced and follow the advice presented in this chapter, debt is something you should never be forced to deal with.

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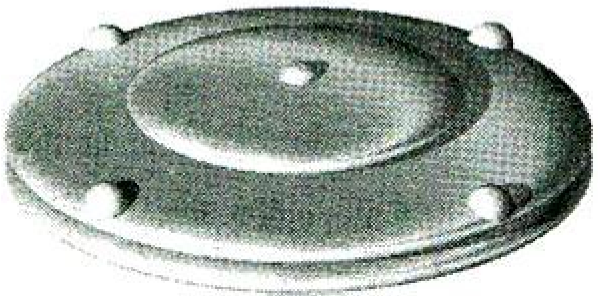


Chapter Six

RESEARCH AND MANUFACTURING

One of the easiest things to overlook for a player who has just begun playing X-COM is the important role the research of new technologies plays in the game. Perhaps the most common mistake made by new players is to throw lots of research time into the study of bigger and better weapons and, after the weapons technology is gained, ignore research altogether in favor of the war and mayhem made possible by his new arsenal.

Much more is involved in the research element of X-COM than just being able to construct more lethal weaponry. This chapter examines the research element of the game and gives you hints and strategies for making the most of your scientists. Later, this chapter also examines the methods and strategies of manufacturing items made possible through the research efforts of your scientists.

RESEARCH

It is easy for new X-COM players to overlook the research element of the game at first. This is probably because there is no research work taking place when the game begins. The first thing you should do when you start playing is to give your idle scientists something to do.

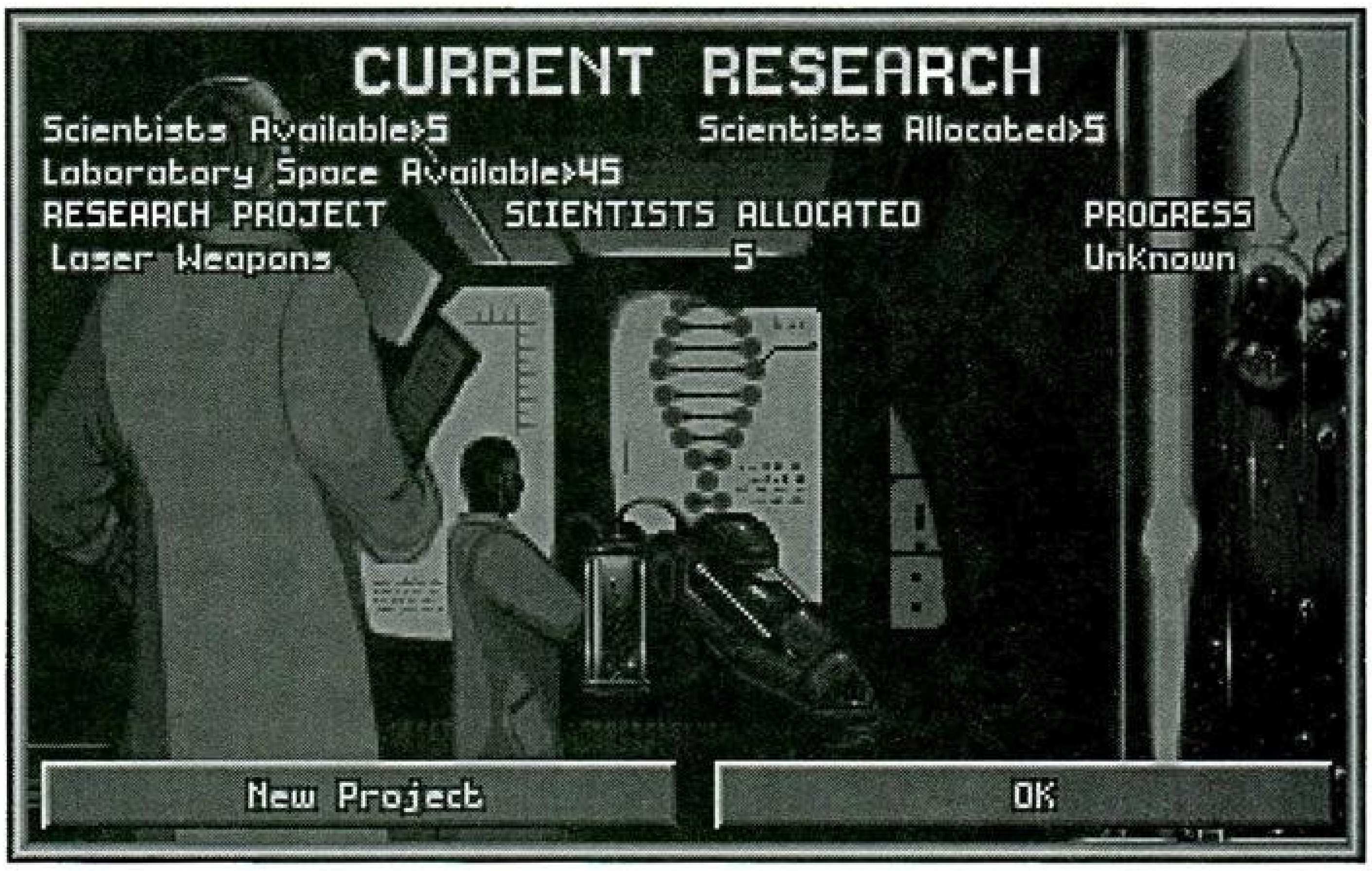
HOW TO BEGIN RESEARCH PROJECTS

Research in the game is performed by scientists. At the beginning of each game, you automatically have ten scientists assigned to the your base. When the game begins, your scientists are sitting idle in their laboratory, awaiting your orders to begin work on a research topic. You can choose from several research topics.

To assign your scientists to a research project, click the Research button on the Bases screen. When you do, the Current Research window appears, as shown in Figure 6-1.

This window shows the following information:

- **Scientists Available:** The number of scientists at the base who are available to be assigned to research projects
- **Scientists Allocated:** The number of scientists at the base who are assigned to a research project
- **Laboratory Space Available:** The amount of free lab space available for researching new projects



CURRENT RESEARCH

Scientists Available>5 Scientists Allocated>5

Laboratory Space Available>45

RESEARCH PROJECT	SCIENTISTS ALLOCATED	PROGRESS
Laser Weapons	5	Unknown

Figure 6-1
The Current Research window.

Directly below this information is a list that shows the research projects under way in your laboratories, the number of scientists allocated to each project, and a general progress report showing each project's current status. When you see this window for the first time, no projects are listed.

To begin a new research project, click the New Project button. This step brings up the New Research Projects window, as shown in Figure 6-2.

This window lists all research topics available for study. To choose a topic, click on it. A new window then appears, listing the chosen topic at the top and giving you the option to begin the research project or cancel. This Start Project window is shown in Figure 6-3. To begin researching the displayed topic, click the Start Project button.

The window changes to the Scientists Allocated window. Again, the number of scientists available and the amount of available lab space are listed. To assign scientists to the research project, click the up arrow. To increase the number of scientists assigned, continue to click the up arrow. To decrease the number, click the down arrow. When you have assigned the number of scientists you want to the project, click the OK button. The Scientists Allocated window is shown in Figure 6-4.

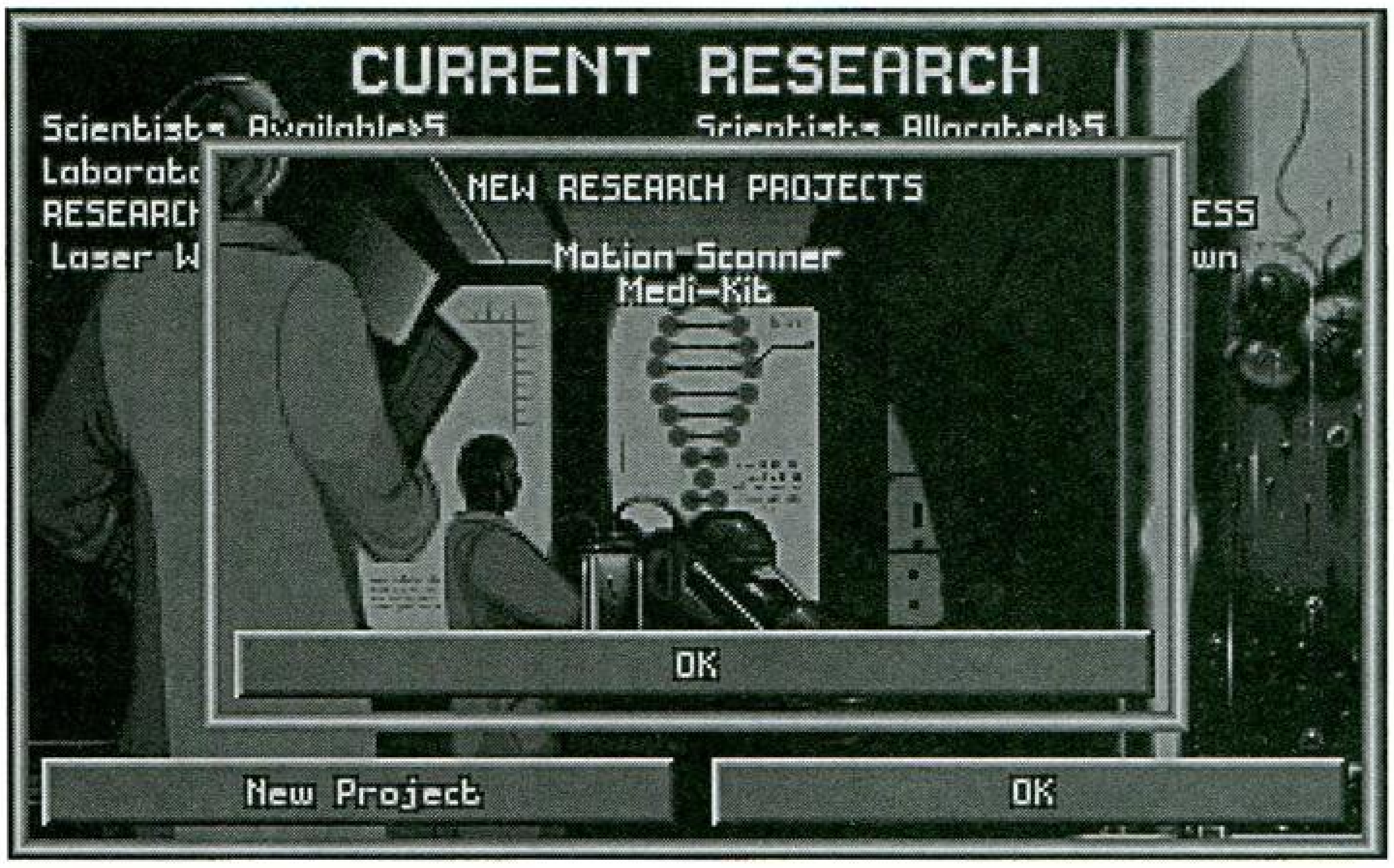
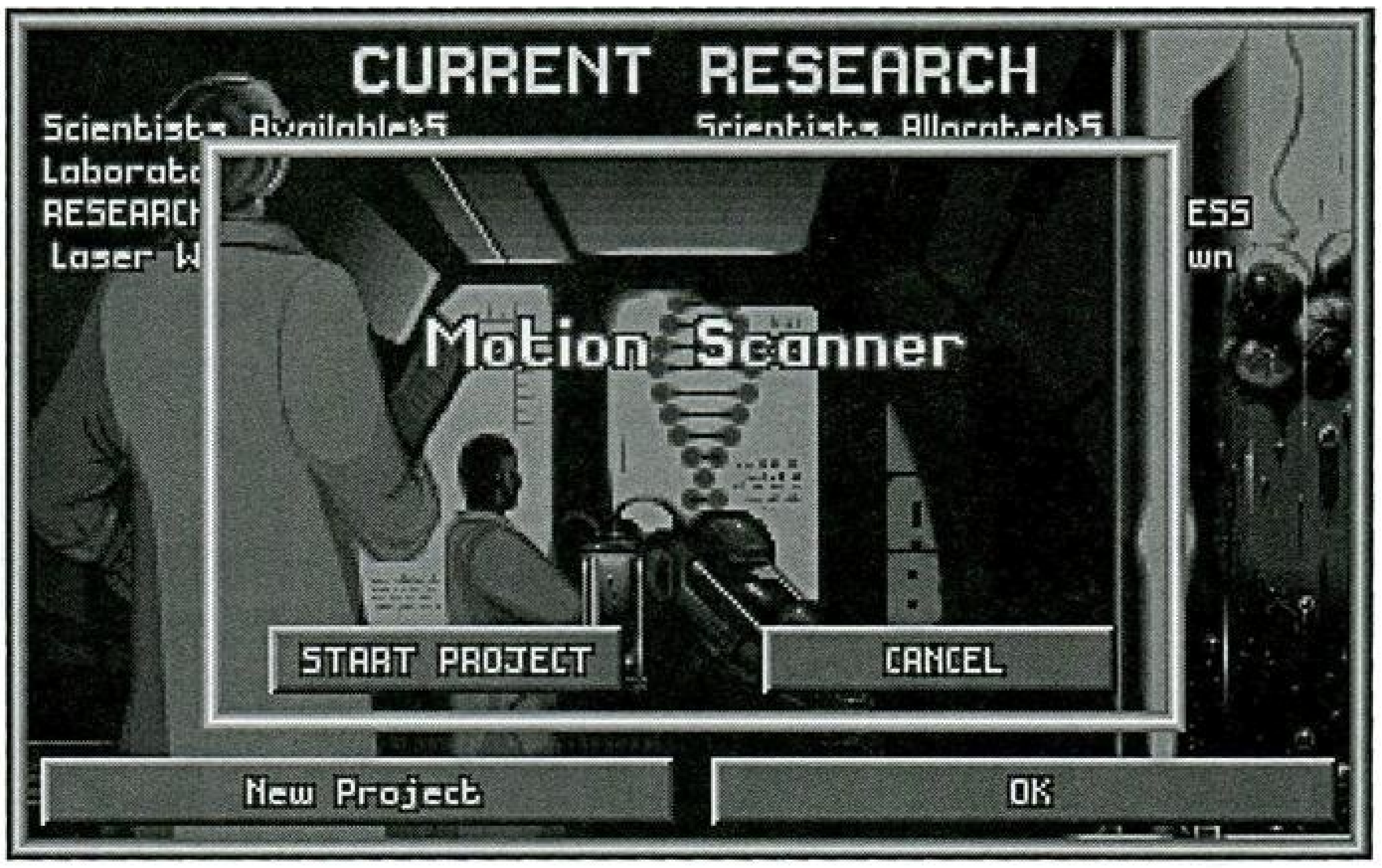

CURRENT RESEARCH
Scientists Available>5
Scientists Allocated>5
Laborato
RESEARCH
Laser W
ESS
wn
NEW RESEARCH PROJECTS
Motion Scanner
Medi-Kit
OK
New Project
OK

Figure 6-2
The New Research Projects window.

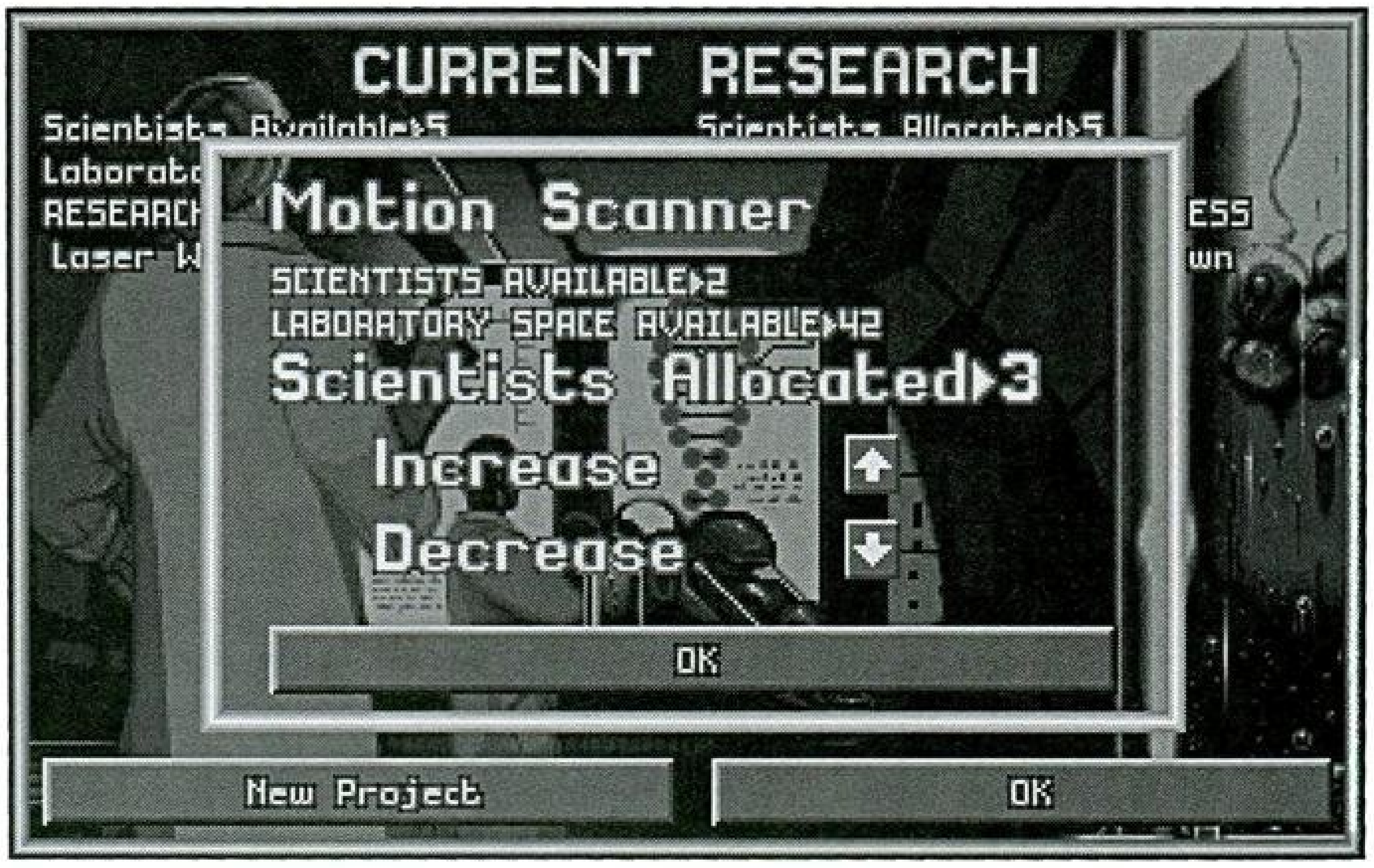

CURRENT RESEARCH
Motion Scanner
START PROJECT
CANCEL
New Project
OK

Scientists Available▸5
Scientists Allocated▸5

Figure 6-3
The Start Project window.

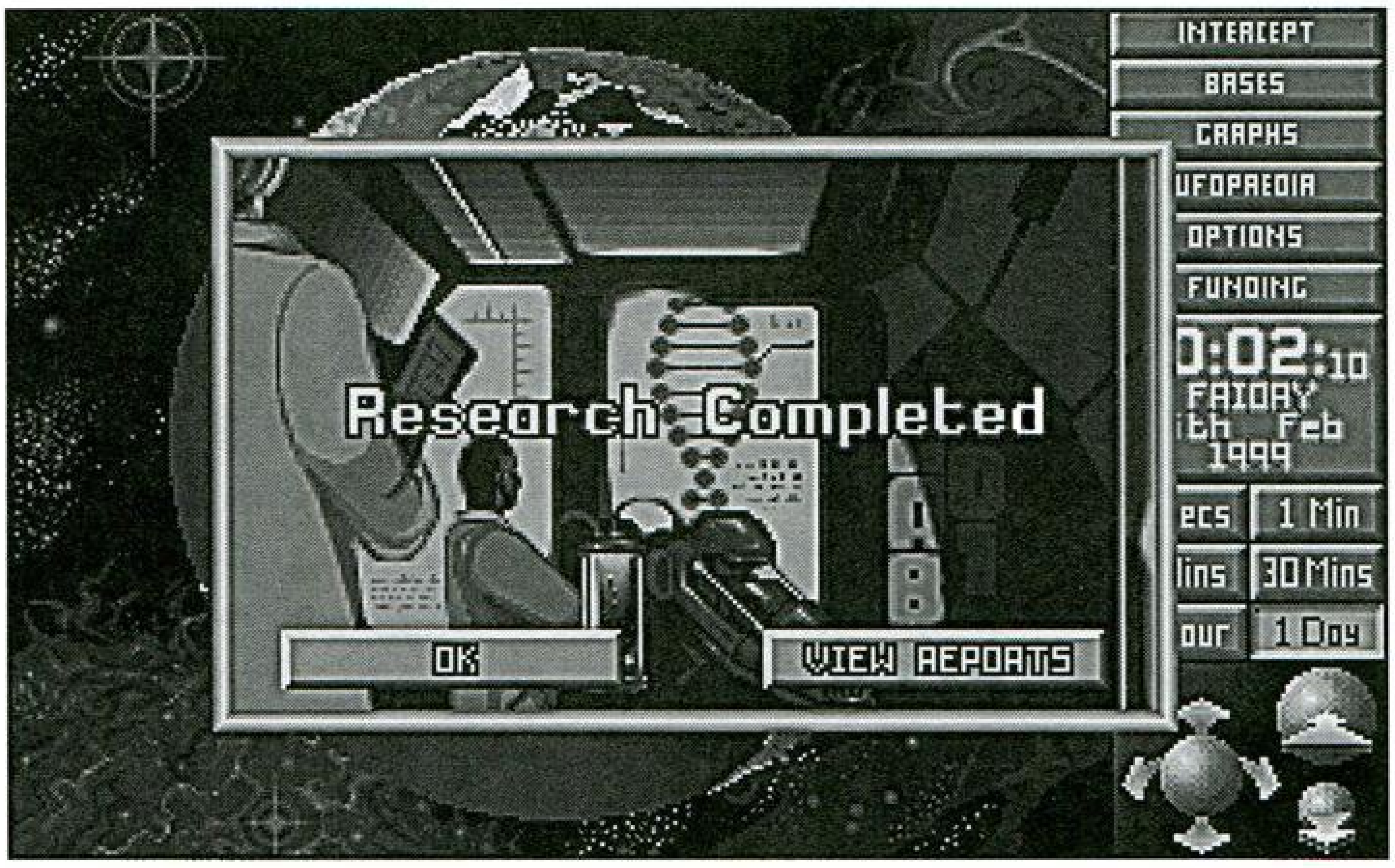
When you click OK, you return to the Current Research window. The window shows the new project in progress. Repeat the preceding procedure to begin another research project. To change the number of scientists assigned to an active project, click on it. The Scientists Allocated window appears, allowing you to make the change you want.

When you have finished assigning scientists to research projects, click the OK button to return to the Bases screen. Then


CURRENT RESEARCH
Motion Scanner
Increase
Decrease
OK
New Project
OK

Scientists Available▸5
Scientists Allocated▸5
SCIENTISTS AVAILABLE▸2
LABORATORY SPACE AVAILABLE▸42
Scientists Allocated▸3

Figure 6-4
The Scientists Allocated window.



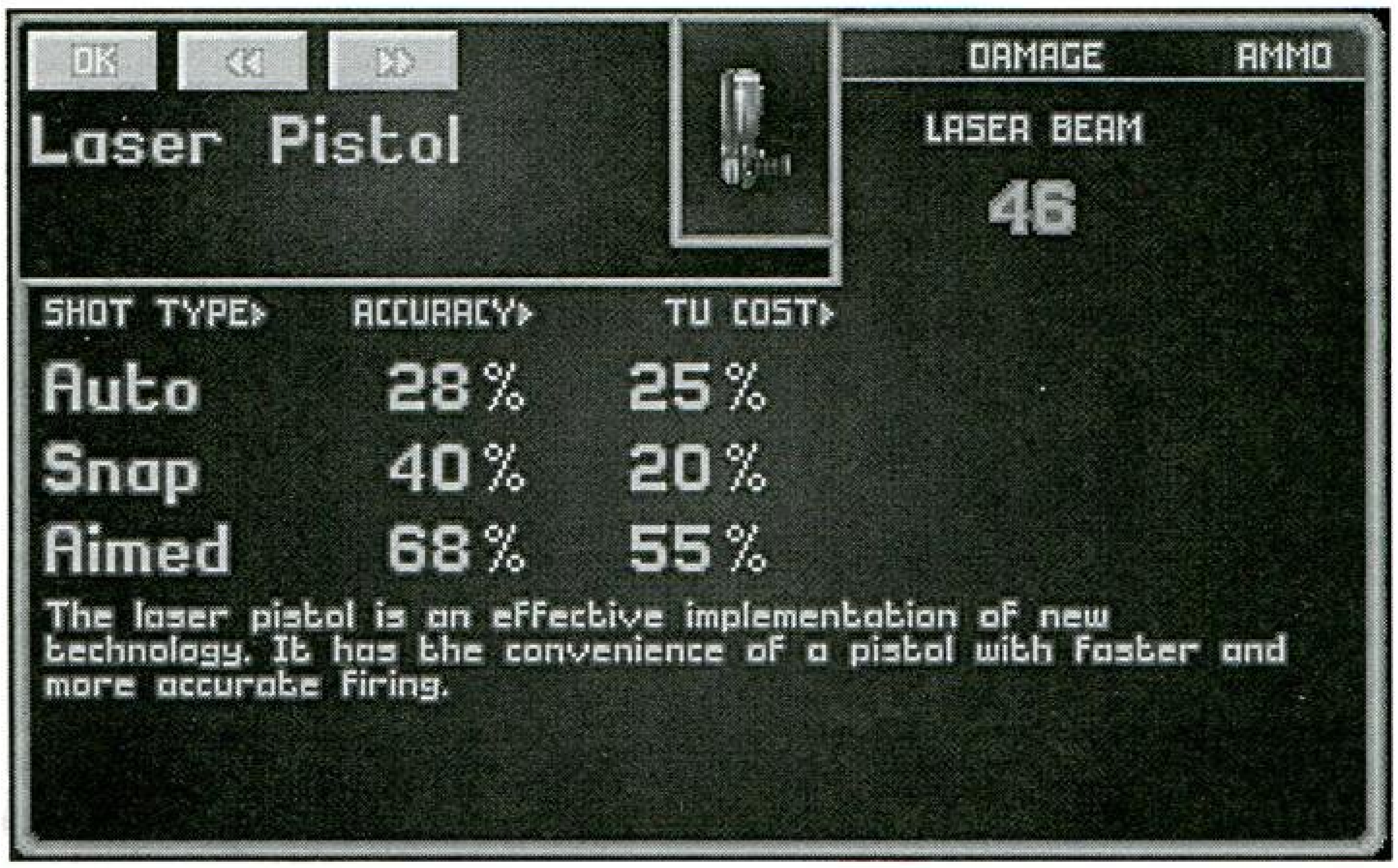
Research Completed

INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
0:02:10
FRIDAY
th Feb
1999
ecs
1 Min
ins
30 Mins
our
1 Day
OK
VIEW REPORTS

Figure 6-5
The Research Completed Window.

return to the Geoscape screen. The assigned research projects continue automatically as you tend to other activities in the game. When a project is complete, the Research Completed window appears and notifies you, as shown in Figure 6-5.

This window gives you two options. If you choose OK, the window closes and you return to the Geoscape. If you choose the View Reports option, a window appears and shows you the results of the research. An example is shown in Figure 6-6.



Laser Pistol

DAMAGE AMMO

LASER BEAM

46

SHOT TYPE>	ACCURACY>	TU COST>
Auto	28 %	25 %
Snap	40 %	20 %
Aimed	68 %	55 %

The laser pistol is an effective implementation of new technology. It has the convenience of a pistol with faster and more accurate firing.

Figure 6-6
Results of a research project.

Not all research projects have a results screen. If this is the case, no results appear. The results screens shown after the completion of a research project may also be viewed at any time in the UFOpedia.

After viewing the report, you have the option to Allocate Research or Allocate Manufacture. If you choose to allocate research, the New Research Projects window appears and shows all topics available. Choose a new topic as you did earlier.

The Allocate Manufacture option allows you to assign your engineers to build the item just researched. This option is discussed later in this chapter.

To continue without reassigning your scientists, click the OK button.

THE IMPORTANCE OF RESEARCH

The research performed by your scientists serves many purposes in the game. The most obvious is to advance X-COM's weapons technology sufficiently to give the organization a fighting chance in battle against the aliens by using their own technology against them. Although this function is important, it is by no means the only role research plays in the game.

Research increases knowledge and technology in transportation, by examining the methods and materials used in the construction of UFOs. It reveals the technology required to construct armor to protect X-COM soldiers. The completion of research projects also leads to a higher standing with the countries who run X-COM. Research also adds to your score, as discussed in Chapter 1, "X-COM: An Overview."

One of the most important gains from research is information about the aliens: their biological characteristics, details about their culture and activities, and their strengths and weaknesses. Ultimately, your research effort gives you the information you need to find and get to the main alien base on Mars.

The research of much of this required knowledge is more than casual. Military missions must be launched specifically for the purpose of capturing live aliens because, in order to learn about many of the topics necessary to win the game, you must interrogate a living alien being.

Research should always be your primary concern. The faster you acquire knowledge, the more effectively you can do battle with, and ultimately defeat, the aliens' plans.

THE RESEARCH TREE

The research track in X-COM follows a tree structure. Each new topic that is researched gives you the knowledge to build a new piece of equipment, leads to the ability to study more advanced topics, or both. Many research topics have prerequisites and cannot be researched until less advanced topics have been studied first.

Only three topics are available for study at the beginning of a new game. New topics of study become available as you begin to collect live aliens, alien corpses, and alien artifacts and equipment.

Figure 6-7 is the X-COM research tree, showing all research topics and the line of study that must be followed to study more advanced topics.

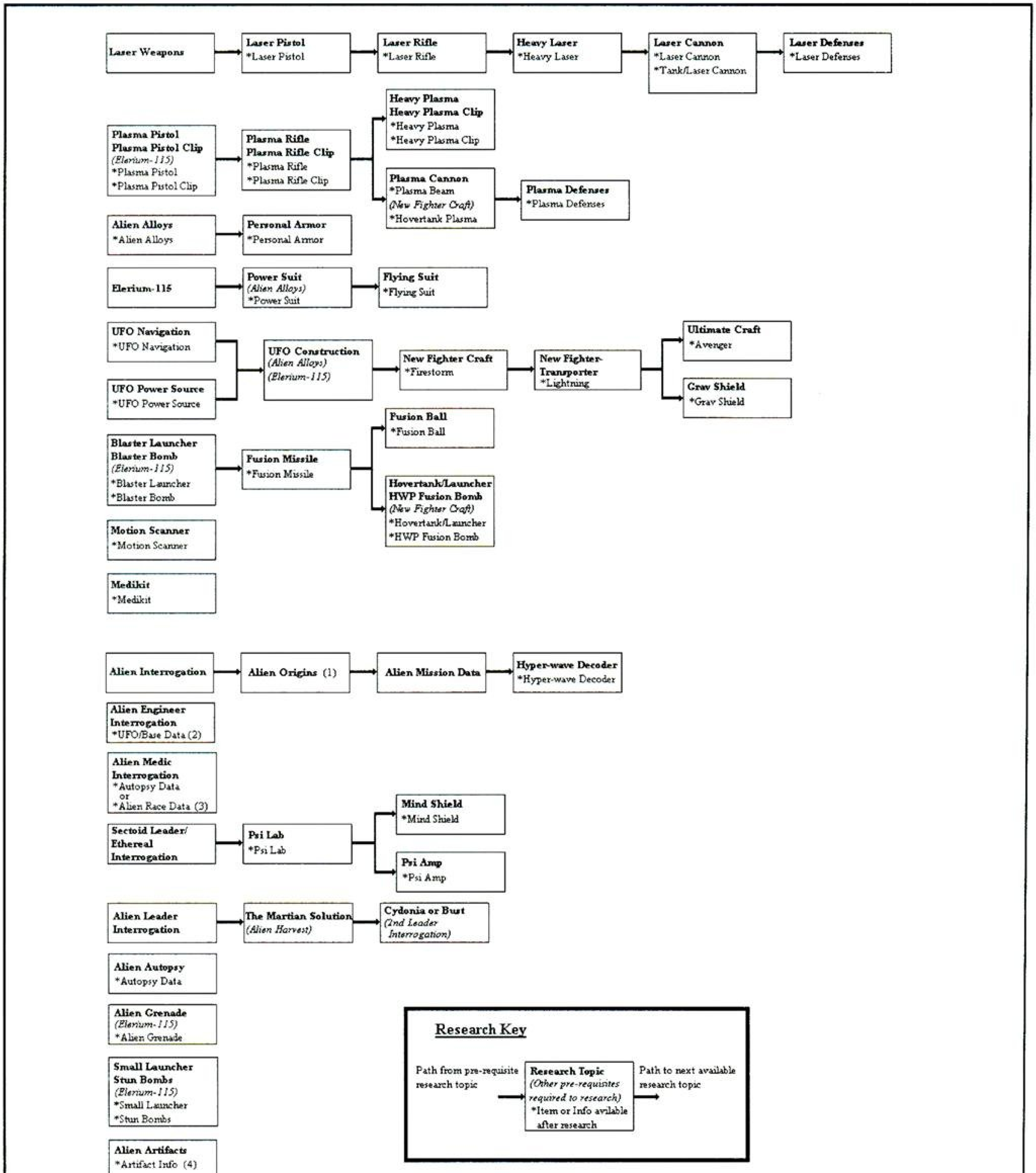
There are ways to bypass the order of the research tree in some cases, by collecting and studying items that appear in the middle of a research line. For instance, you can research the heavy plasma gun and heavy plasma clip as soon as you collect one from the site of a ground assault. By studying this alien weapon first, you effectively bypass study of the plasma pistol and clip and the plasma rifle and clip.

The one rather small disadvantage to this process is that the skipped technologies must still be studied in order to use them. In other words, even if you have researched and are producing and using the heavy plasma, you remain unable to use the other, less advanced plasma weapons until your scientists research them.

THE UFOPEDIA

The UFOpedia is an on-line encyclopedia that contains text and graphics detailing all the knowledge currently available to X-COM.

You access the UFOpedia from the Geoscape screen by clicking the UFOpedia button from the Geoscape Options menu. When you click this button, the Select Subject screen appears, as shown in Figure 6-8.


Laser Weapons
Laser Pistol *Laser Pistol
Laser Rifle *Laser Rifle
Heavy Laser *Heavy Laser
Laser Cannon *Laser Cannon *Tank/Laser Cannon
Laser Defenses *Laser Defenses
Heavy Plasma Heavy Plasma Clip *Heavy Plasma *Heavy Plasma Clip
Plasma Pistol Plasma Pistol Clip (Elerium-115) *Plasma Pistol *Plasma Pistol Clip
Plasma Rifle Plasma Rifle Clip *Plasma Rifle *Plasma Rifle Clip
Plasma Cannon *Plasma Beam (New Fighter Craft) *Hovertank Plasma
Plasma Defenses *Plasma Defenses
Alien Alloys *Alien Alloys
Personal Armor *Personal Armor
Elerium-115
Power Suit (Alien Alloys) *Power Suit
Flying Suit *Flying Suit
UFO Navigation *UFO Navigation
UFO Power Source *UFO Power Source
UFO Construction (Alien Alloys) (Elerium-115)
New Fighter Craft *Firestorm
New Fighter-Transporter *Lightning
Ultimate Craft *Avenger
Grav Shield *Grav Shield
Fusion Ball *Fusion Ball
Blaster Launcher Blaster Bomb (Elerium-115) *Blaster Launcher *Blaster Bomb
Fusion Missile *Fusion Missile
Hovertank/Launcher HWP Fusion Bomb (New Fighter Craft) *Hovertank/Launcher *HWP Fusion Bomb
Motion Scanner *Motion Scanner
Medikit *Medikit
Alien Interrogation
Alien Origins (1)
Alien Mission Data
Hyper-wave Decoder *Hyper-wave Decoder
Alien Engineer Interrogation *UFO/Base Data (2)
Alien Medic Interrogation *Autopsy Data or *Alien Race Data (3)
Mind Shield *Mind Shield
Sectoid Leader/ Ethereal Interrogation
Psi Lab *Psi Lab
Psi Amp *Psi Amp
Alien Leader Interrogation
The Martian Solution (Alien Harvest)
Cydonia or Bust (2nd Leader Interrogation)
Alien Autopsy *Autopsy Data
Alien Grenade (Elerium-115) *Alien Grenade
Small Launcher Stun Bombs (Elerium-115) *Small Launcher *Stun Bombs
Alien Artifacts *Artifact Info (4)
Research Key
Path from pre-requisite research topic
Research Topic (Other pre-requisites required to research) *Item or Info avilable after research
Path to next available research topic

(1) When an alien race is interrogated for the first time, Alien Data on that race is also received.
(2) Captured engineers give information on the type of UFO or base where they were stationed. See also note #1.
(3) Alien Medics provide Alien Data on their own race (as per note #1), as well as Alien or Autopsy Data for one other race.
(4) Alien Artifacts include: Alien Food, Alien Entertainment, Alien Reproduction, Alien Surgery, and Examination Room.

Figure 6-7 The X-COM research tree.

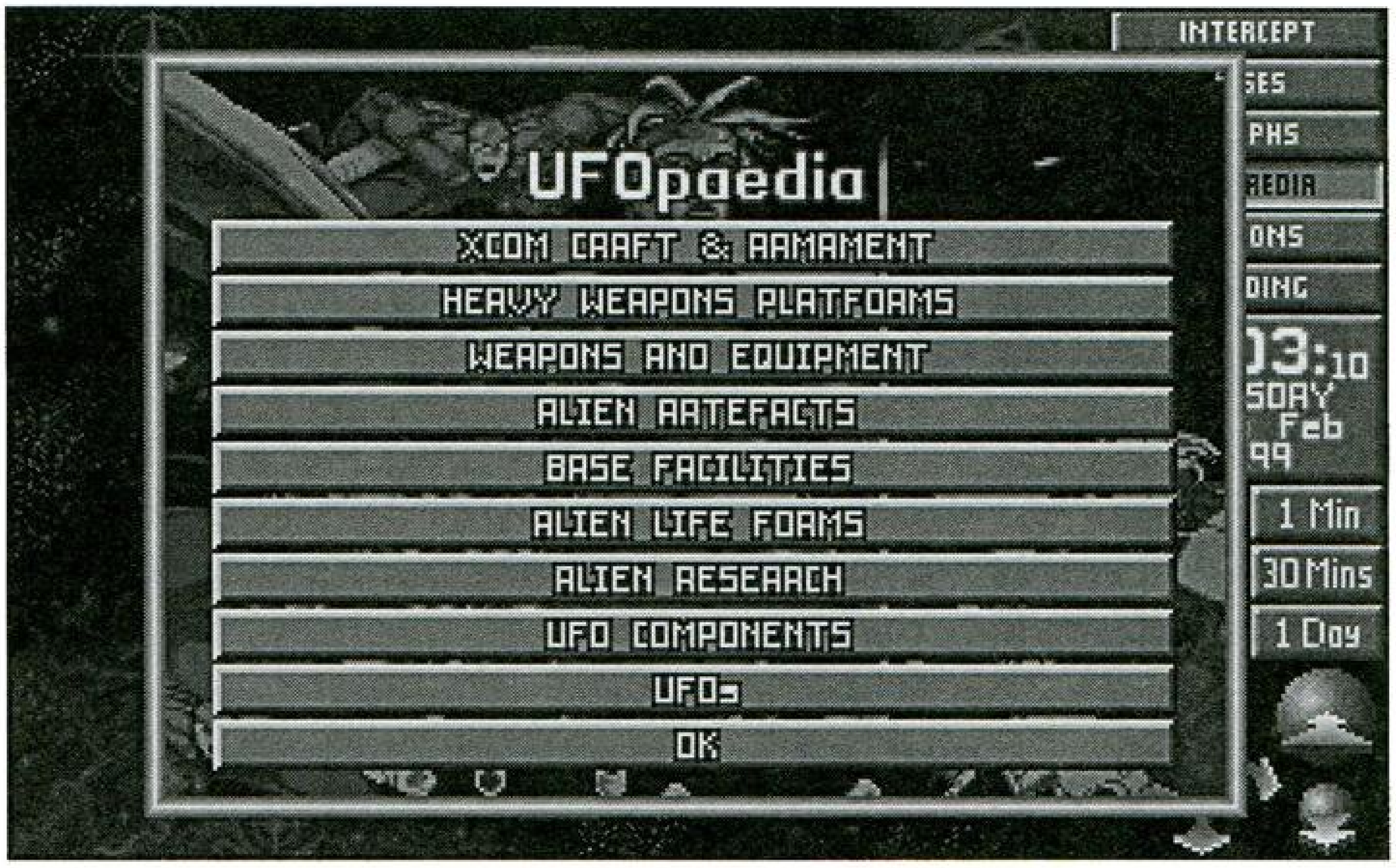

INTERCEPT
SES
PHS
AEDIA
ONS
DING
UFOpaedia
XCOM CRAFT & ARMAMENT
HEAVY WEAPONS PLATFORMS
WEAPONS AND EQUIPMENT
ALIEN ARTEFACTS
BASE FACILITIES
ALIEN LIFE FORMS
ALIEN RESEARCH
UFO COMPONENTS
UFOs
OK
03:10
SDAY
Feb
99
1 Min
30 Mins
1 Day

Figure 6-8
The UFOpedia Select Subject screen.

The entries in the UFOpedia are divided into the following categories:

- **X-COM Craft & Armament:** The air- and spacecraft available for X-COM use, along with the missiles and other armament they can be equipped with
- **Heavy Weapons Platforms:** Tanks and hovertanks available for X-COM use
- **Weapons and Equipment:** Weapons and equipment of Terran origin available for use by X-COM soldiers
- **Alien Artifacts:** Alien weapons and equipment that have been recovered and researched
- **Base Facilities:** A listing of all structures currently available to be built at X-COM bases
- **Alien Life Forms:** Information gathered through autopsies of alien corpses and through the study of live alien specimens
- **Alien Research:** Information about alien activities gained through the interrogation of live aliens
- **UFO Components:** Information about equipment and other objects recovered from UFOs
- **UFOs:** A listing of UFO types and their known capabilities

Not all knowledge is available from the beginning of the game. Items are added to the appropriate categories of the UFOpedia entries as research projects are completed.

TIME REQUIRED FOR RESEARCH

Each research topic requires a set amount of time in order to perform a complete study of the subject. The amount of time required for each topic is expressed in man/days. One man/day is the amount of work one person can do in a single day. A research project that requires 50 man/days to complete, therefore, requires 50 days of work for a single scientist. The more scientists assigned to a research project, the faster the project is completed. If 25 scientists were assigned to the same 50 man/day project, it would require only two days to complete the research.

Table 6-1 lists all research topics and the number of man/days required to complete each project.

RESEARCH STRATEGIES

There are as many opinions concerning how one should approach the problem of handling research in the game as there are X-COM players. This section presents a strategy that works well but that is conservative when it comes to scoring points. A number of strategies used by some of the best X-COM players are presented in Chapter 12, "Expert Advice," and the strategies also work well if you find this strategy to be a little conservative.

Begin the game by at least doubling your pool of scientists. The more scientists you have, the more quickly you can research each topic. You can never have too many scientists at the beginning of the game. Immediately begin construction on a second laboratory at your base at the beginning of the game, and add more scientists to your team as frequently as your funds allow.

Begin by studying the medi-kit: Of all the items available at the beginning of the game, this is perhaps the most useful. Put all your scientists on the project to get the research done as quickly as possible.

By the time the medi-kit research is completed, your soldiers likely will have recovered a number of plasma weapons. If this is the case, have your scientists research the heaviest plasma weapon available—the heavy plasma, if possible. Because it is one of the more powerful and accurate weapons in the game, it is an excellent weapon choice for arming the bulk of your soldiers.

If you *haven't* picked up any plasma weapons by this time, your first priority should be to improve your weaponry. Research laser weapons next. Although lasers are not as powerful as plasma weaponry is, lasers are a vast improvement over conventional rifles and pistols. Some players prefer lasers over plasma weapons because of their speed and the fact that they don't require an ammunition clip. After completing laser weapons research, quickly research the laser pistol and rifle. Begin constructing laser rifles as soon as possible.

After you have researched improved weaponry, turn your attention to armor. By this time, you definitely should have some supply of alien alloys you have collected at the site of a ground assault. Research in the field of alien alloys allows you to research and build personal armor. Begin constructing this armor as soon as it becomes available. When your soldiers collect some Elerium-115 at a ground assault site, throw all your research into this element. After that's completed, you can research and construct power suit armor and flying suit armor, which are much more effective than personal armor.

Two more items that are important to your success are the small launcher and the stun bomb. Research these items as soon as you can. They allow for the easy capture of live alien subjects for interrogation purposes. Until these two items are researched, live-alien capture depends on dumb luck or the use of the stun rod. Neither is a safe or reliable bet.

At this point, your staff of scientists should be large enough for you to be able to effectively split them in half and put each half of the team on separate research projects. To do this with any effectiveness, a scientific staff of at least 50 is required, although 100 or more is not unheard of. Yes, this proposition is an expensive one on a monthly basis, but it is imperative that your technology continue to grow quickly to be able to effectively continue your fight with the aliens.

With your improved weaponry and armor, your soldiers should be able to hold their own against the aliens for a while. This situation leaves you free to begin research into other fields. Have one half of your scientists concentrate on the research of UFO

Table 6-1 Amount of Time Required to Complete Research Projects

Research Project	Man-Hours to Complete
Laser Weapons	50
Motion Scanner	180
Medi-Kit	210
Personal Armor	180
Power Suit	205
Flying Suit	330
Laser Pistol	100
Laser Rifle	300
Heavy Laser	460
Heavy Plasma	800
Heavy Plasma Clip	400
Plasma Rifle	700
Plasma Rifle Clip	400
Plasma Pistol	600
Plasma Pistol Clip	400
Blaster Launcher	900
Blaster Bomb	300
Small Launcher	550
Stun Bomb	180
Alien Grenade	200
Psi-Amp	500
Mind Probe	600
Elerium-115	450
UFO Power Source	450
UFO Navigation	450
UFO Construction	450
Alien Food	150
Alien Reproduction	150
Alien Entertainment	150
Alien Surgery	150
Alien Abduction	150

(cont. on page 151)

Table 6-1 Amount of Time Required to Complete Research Projects

Research Project	Man-Hours to Complete
Alien Alloys	400
New Fighter Craft (Firestorm)	600
New Fighter-Transporter (Lightning)	700
Ultimate Craft (Avenger)	900
Craft Laser Cannon	420
Craft Plasma Beam	660
Craft Fusion Ball Launcher	880
Laser Defenses	510
Plasma Defenses	620
Fusion Defenses	800
Grav Shield	930
Mind Shield	360
Psi-Lab	420
Hyper-Wave Decoder	670
Tank/Laser Cannon	250

components and construction. This technique leads to the capability to construct better transports and fighters to combat the growing UFO threat. Also, the earlier the Avenger craft is developed, the earlier you can embark on the Final Assault.

The other scientists should concentrate on the aliens. Study live aliens first. They provide you with information about alien activity and, ultimately, the location of the alien base. Autopsies are less important: Alien corpses should be researched only if your scientists would otherwise be idle. Any information normally gained from autopsies is eventually revealed through the interrogation of alien medics. The interrogation of alien engineers provides information about UFOs. Navigators provide information about different types of alien activity. Interrogation of leaders eventually reveals the origins of the aliens, and the interrogation of commanders reveals the nature of the Final Assault.

After your scientists have researched all topics relating to UFO construction, turn their attention back to weapons in preparation for the Final Assault. Knowledge of the blaster launcher and blaster bomb can be extremely helpful when you go up against the final base. Research this weapon earlier if you have the chance, because it is also a useful tool in defending your base.

When you are satisfied that you have everything you need, check the list of remaining research projects. Complete research quickly on all remaining topics by putting all the scientists on single projects. With a big team, research time is cut to almost nothing, especially on small projects. Even if the research is of no benefit at this point, getting the research points can't hurt.

If you conduct a concerted research operation throughout the game, you eventually run out of research projects for your scientists. It is unlikely that every topic available has been researched; in practice, there are always a few UFO types or mission types that haven't been discovered by the end of the game because you haven't captured and interrogated the correct alien for that information. These topics do not affect the outcome of the game, so it isn't important that you keep a full team of scientists available to study them if the opportunity arises. When you reach this point, it is time to cut your research team to a minimum—no more than 20 scientists. This technique saves you money, allowing you to buy or build more equipment for the Final Assault. The remaining 20 scientists can study the few remaining research topics if they happen to come along.

As stated, this is just one strategy for research; many other combinations and strategies may work equally well. Regardless of in which order you decide to handle research projects, just be sure that you always keep your scientists active. Falling behind in research and technology is one sure way to lose the game.

MANUFACTURING

The manufacture of equipment and weapons goes hand in hand with scientific research. Minute scientific study of equipment is useless unless you have some way to put the knowledge you have gained to some practical use.

Manufacturing processes are handled by X-COM engineers. These skilled professionals are capable of producing equipment based on alien designs, by using blueprints drawn up by the scientists. They can do this at record speed, by using the finest skills and equipment available on Earth.

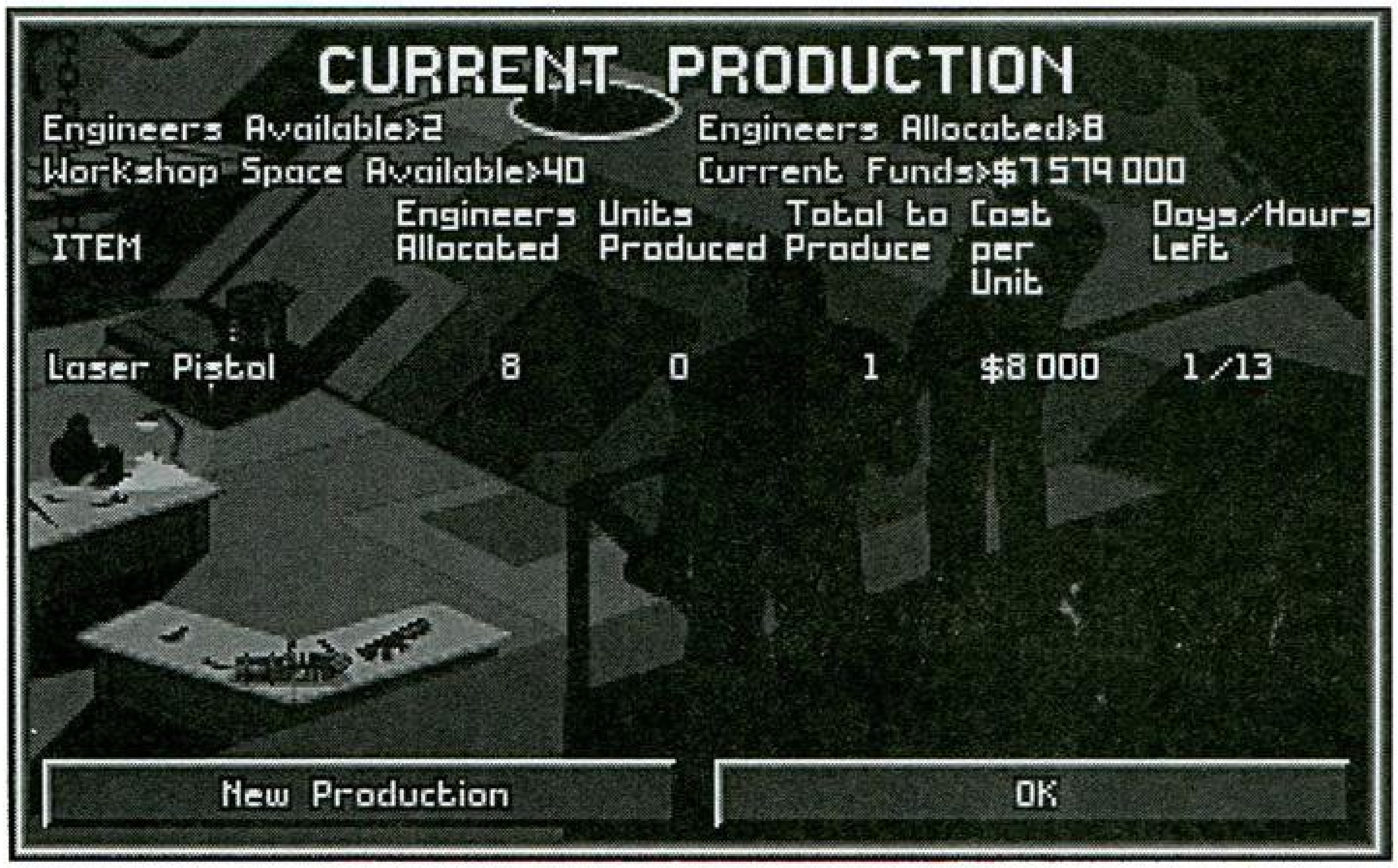
HOW TO MANUFACTURE

To begin the manufacturing process, click the Manufacture button from the Bases screen. This step brings up the Current Production screen, as shown in Figure 6-9.

The Current Production screen shows the following information:

- **Engineers Available:** The number of engineers available to be assigned to a project
- **Engineers Allocated:** The number of engineers assigned to the project in progress
- **Workshop Space Available:** The amount of work space available for the construction of items
- **Current Funds:** The amount of money available in the X-COM treasury

Below this information is a list of items in the process of being built. Listed for each project are the name of the item, the number of



CURRENT PRODUCTION

Engineers Available>2
Engineers Allocated>8
Workshop Space Available>40
Current Funds>$7 579 000

ITEM	Engineers Allocated	Units Produced	Total to Produce	Cost per Unit	Days/Hours Left
Laser Pistol	8	0	1	$8 000	1/13

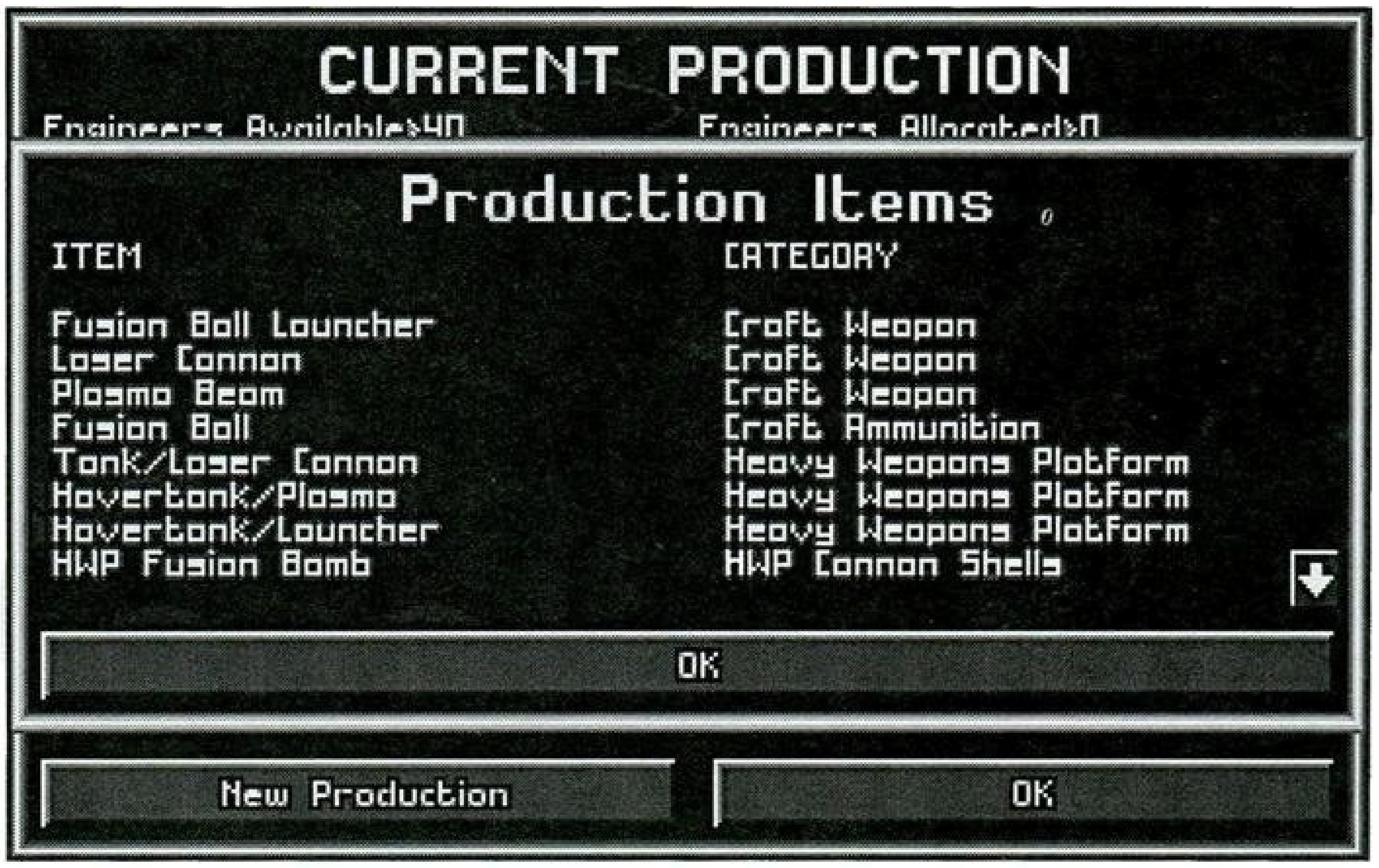
Figure 6-9
The Current Production screen.

engineers working on the project, the number of units of the item that have been produced so far, the total number of items you have ordered the engineers to produce, the cost per unit, and the number of days or hours remaining before the project is complete.

To begin a new project, click the New Production button. This step brings up the Production Items window. This window, shown in Figure 6-10, displays a list of items that are available to be built. As research on new items is completed by your scientists, these items are automatically added to the production list. To choose an item to be manufactured, click on it.

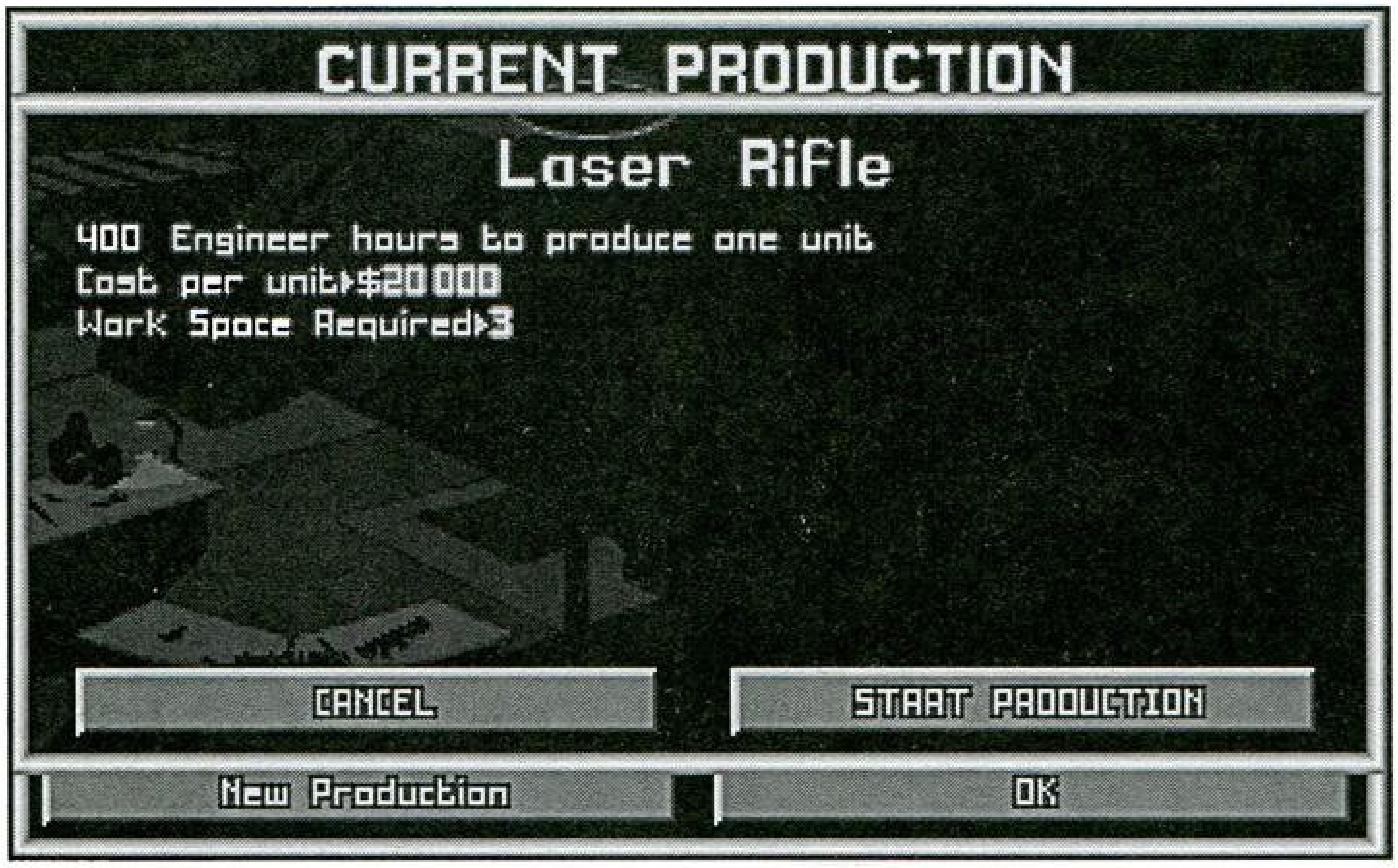
When you choose an item, the Start Production window appears (see Figure 6-11). This window shows the number of engineer/days required to produce one unit of the chosen item, the cost per unit, and the amount of work space required to produce each unit. The Start Production window also shows the names and amounts of special materials, if any, that are required to produce each unit of the item. To begin production of the chosen item, click the Start Production button. If you do not have enough of one of the listed special materials to begin the project, the Start Production button is not visible.

The next window to appear is the Engineers Allocated window (see Figure 6-12). This window lists the name of the item to be pro-



ITEM	CATEGORY
Fusion Ball Launcher	Craft Weapon
Laser Cannon	Craft Weapon
Plasma Beam	Craft Weapon
Fusion Ball	Craft Ammunition
Tank/Laser Cannon	Heavy Weapons Platform
Hovertank/Plasma	Heavy Weapons Platform
Hovertank/Launcher	Heavy Weapons Platform
HWP Fusion Bomb	HWP Cannon Shells

Figure 6-10
The New Production window.


CURRENT PRODUCTION

Laser Rifle

400 Engineer hours to produce one unit
Cost per unit▸$20 000
Work Space Required▸3

Figure 6-11
The Start Production window.

duced, the number of engineers available to be assigned to the project, and the amount of available work space. The controls on this screen allow you to increase and decrease the number of engineers allocated to the project and the number of units to be produced.

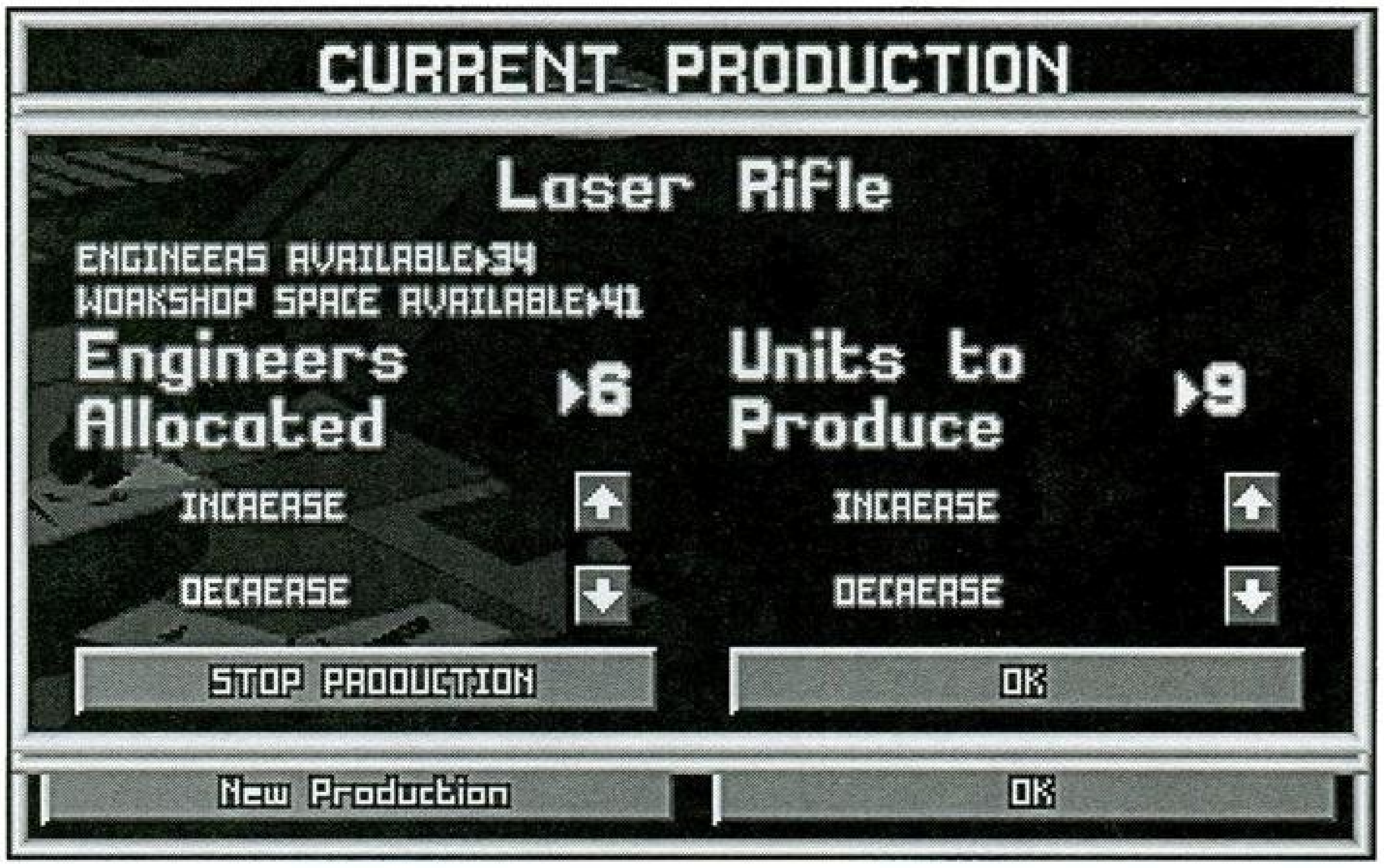
After you have chosen the number of engineers to be assigned to the project and the number of units to be produced, click the OK button. Production of the chosen item begins automatically.

When a manufacturing job is finished, a window appears on the Geoscape screen to notify you that production is complete. The completed items are added to your stores, and the engineers are again available to produce new items.

You may change the number of assigned engineers or units being produced at any time during the manufacturing process from the Current Production window. Click on the item in question, and adjust the number of engineers or items from the Engineers Allocated window.

TIME REQUIRED FOR PRODUCING ITEMS

Each item in the game that must be built by your engineers has a set number of engineer days required for the production of each unit.



CURRENT PRODUCTION

Laser Rifle

ENGINEERS AVAILABLE>34
WORKSHOP SPACE AVAILABLE>41

Engineers Allocated >6

Units to Produce >9

Figure 6-12
The Engineers Allocated window.

An engineer/day is the amount of work that can be done by a single engineer in one day. If one unit of an item requires 50 engineer/days to complete, for example, one engineer can complete one unit of the item in 50 days. The same item can be produced by 50 engineers in one day.

Table 6-2 lists all manufactured goods that can be produced and the number of engineer/days required to produce each one.

MANUFACTURING STRATEGIES

There are only a few things to remember when it comes to manufacturing. First make sure that you have all the necessary materials required for the manufacture of chosen items. Also make sure that the manufacture of the items in question doesn't leave you dangerously low on special materials. This advice is especially important when it comes to Elerium-115, which is difficult to obtain.

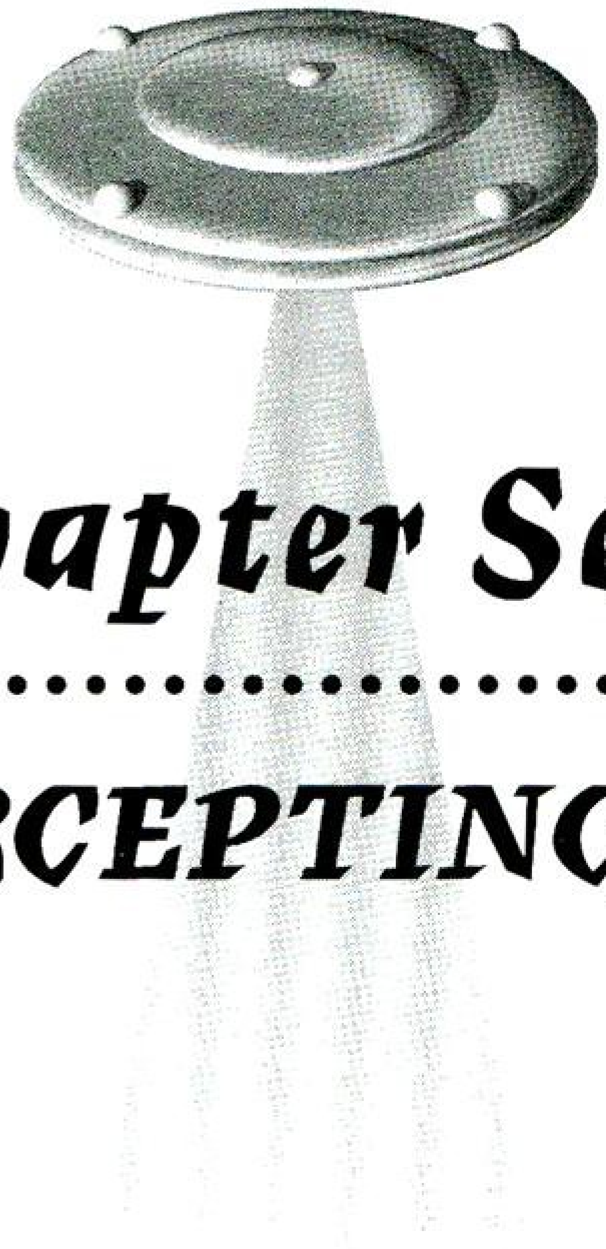
Second, try to plan ahead when it comes to manufacturing. Keep an eye on your base stores and identify items you need to manufacture before you need them. If you like to use blaster launchers when you go out on a ground assault, stock up on ammunition early. It takes time to build things: It's much too late to begin building blaster bombs by the time you are notified that an alien terror raid

Table 6-2 Per-Unit Time Required to Produce Manufactured Items

Item	Engineer-Hours to Produce
Alien Alloys	100
Alien Grenade	200
AVENGER	34,000
Blaster Bomb	220
Blaster Launcher	1200
FIRESTORM	14,000
Flying Suit	1400
Fusion Ball	600
Fusion Ball Launcher	400
Heavy Laser	700
Heavy Plasma	1000
Heavy Plasma Clip	80
Hovertank/Launcher	1400
Hovertank/Plasma	1200
HWP Fusion Bomb	400
Laser Cannon	300
Laser Pistol	300
Laser Rifle	400
LIGHTNING	18,000
Medi-Kit	420
Mind Probe	1200
Motion Scanner	220
Personal Armor	800
Plasma Beam	500
Plasma Pistol	600
Plasma Pistol Clip	60
Plasma Rifle	820
Plasma Rifle Clip	80
Power Suit	1000
Psi-Amp	500
Small Launcher	900
Stun Bomb	200
Tank/Laser Cannon	1200
UFO Navigation	1600
UFO Power Source	1400

has begun in some city. By the time the blaster bombs are built, the terror raid might be over.

Finally, remember that it isn't necessary to build everything. Some items, such as laser weapons and X-COM craft, must be manufactured. You can find some items—such as plasma weapons and ammunition, blasters and small launchers and their ammunition, and alien grenades —literally lying on the ground after a ground assault mission. Seldom, if ever, is it necessary to produce any of these items. To do so wastes time and money.



Chapter Seven

INTERCEPTING UFOs

Now that you have an idea of the elements that make up the game, it's time to put all these elements to practical use. Deep inside your well-constructed and defensible base, an alarm sounds. Your radar systems have picked up an object just entering detection range. As it gets closer, you see that it matches no known Terran flight profile or design. Seconds later, the computer confirms your suspicions: You have detected a UFO.

Now what?

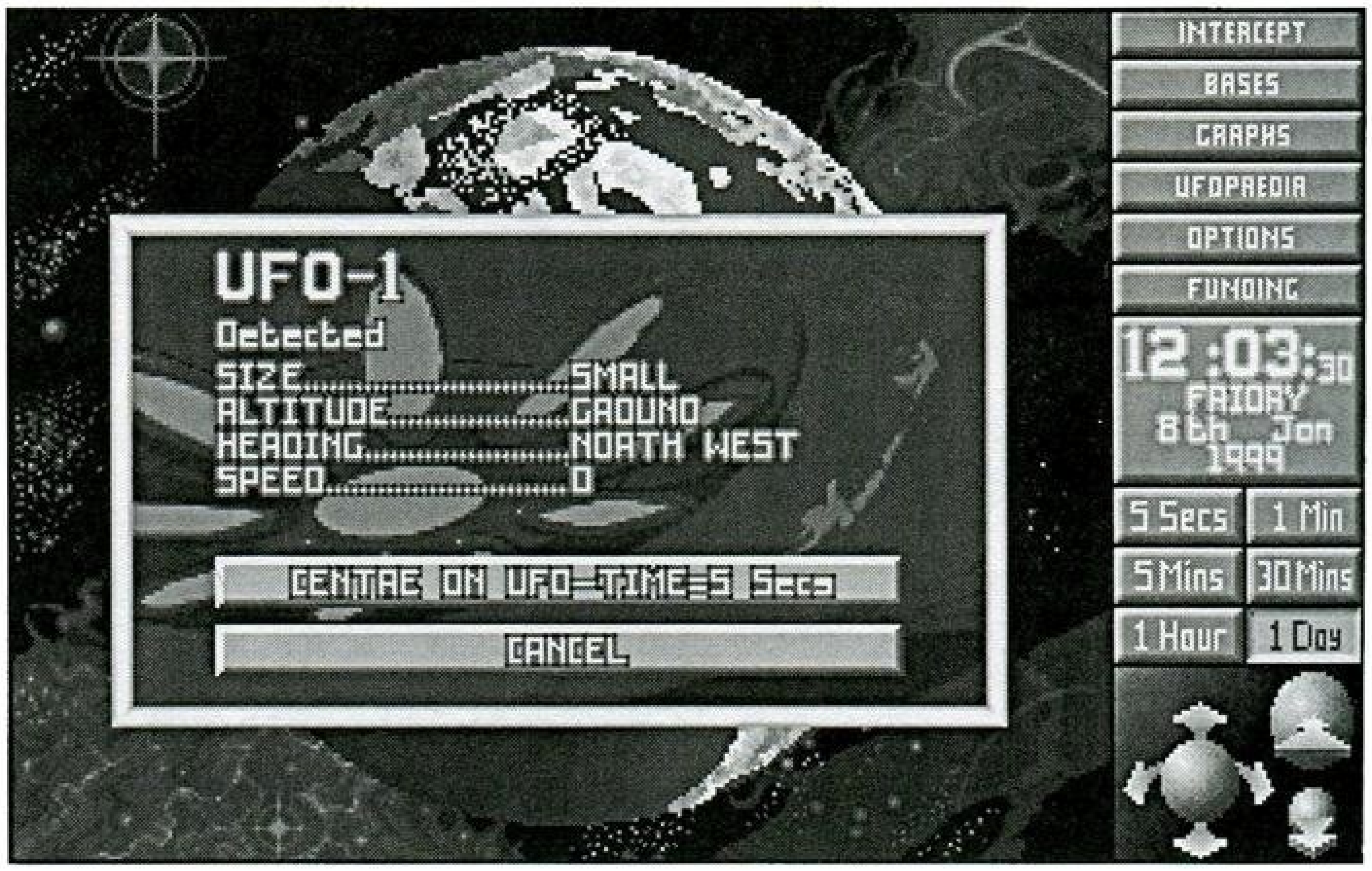
That's what you're about to learn. This chapter takes you through every step of the detection and interception of a UFO.

UFO DETECTION

The detection of UFOs is not, in truth, as dramatic and mysterious as the first paragraph of this chapter suggests. In reality, UFO detection is a completely automatic process. Every 10 minutes of game time, each radar system installed at your bases has a 10 percent chance of detecting a UFO within the detection range of the equipment every 30 game minutes. Hyper-wave decoders automatically detect any UFO within 2400 nautical miles. When a UFO is detected, you receive a message on the UFO Status window, as shown in Figure 7-1.

When a UFO is detected, it is assigned a number that indicates the order in which it was detected (the first one is UFO-1; the second, UFO-2; and so on). This information is displayed at the top of the window. Listed below it are the size, approximate altitude, heading, and speed (in knots) of the UFO. If one of your bases is equipped with a hyper-wave decoder (described in Chapter 3, "X-COM Bases"). The UFO Status window also lists the type of UFO being tracked, the race of aliens aboard the UFO, the UFO's mission, and the continental zone that is the UFO's destination.

Two options in this window allow you to center the Geoscape view on the UFO and slow game-time passage to five seconds or to cancel and ignore the UFO. (The UFO Status window is described in detail in Chapter 2, "The Geoscape Screen.") Click the Center on UFO option. The UFO in question is shown as a moving red blip on the Geoscape globe. The alien is automatically tracked by your detection systems until it has moved out of range.



UFO-1
Detected
SIZE.............................SMALL
ALTITUDE.....................GROUND
HEADING......................NORTH WEST
SPEED...........................0

12 :03:30
FRIDAY
8th Jan
1999

Figure 7-1
Detecting your first UFO.

UFO INTERCEPTION

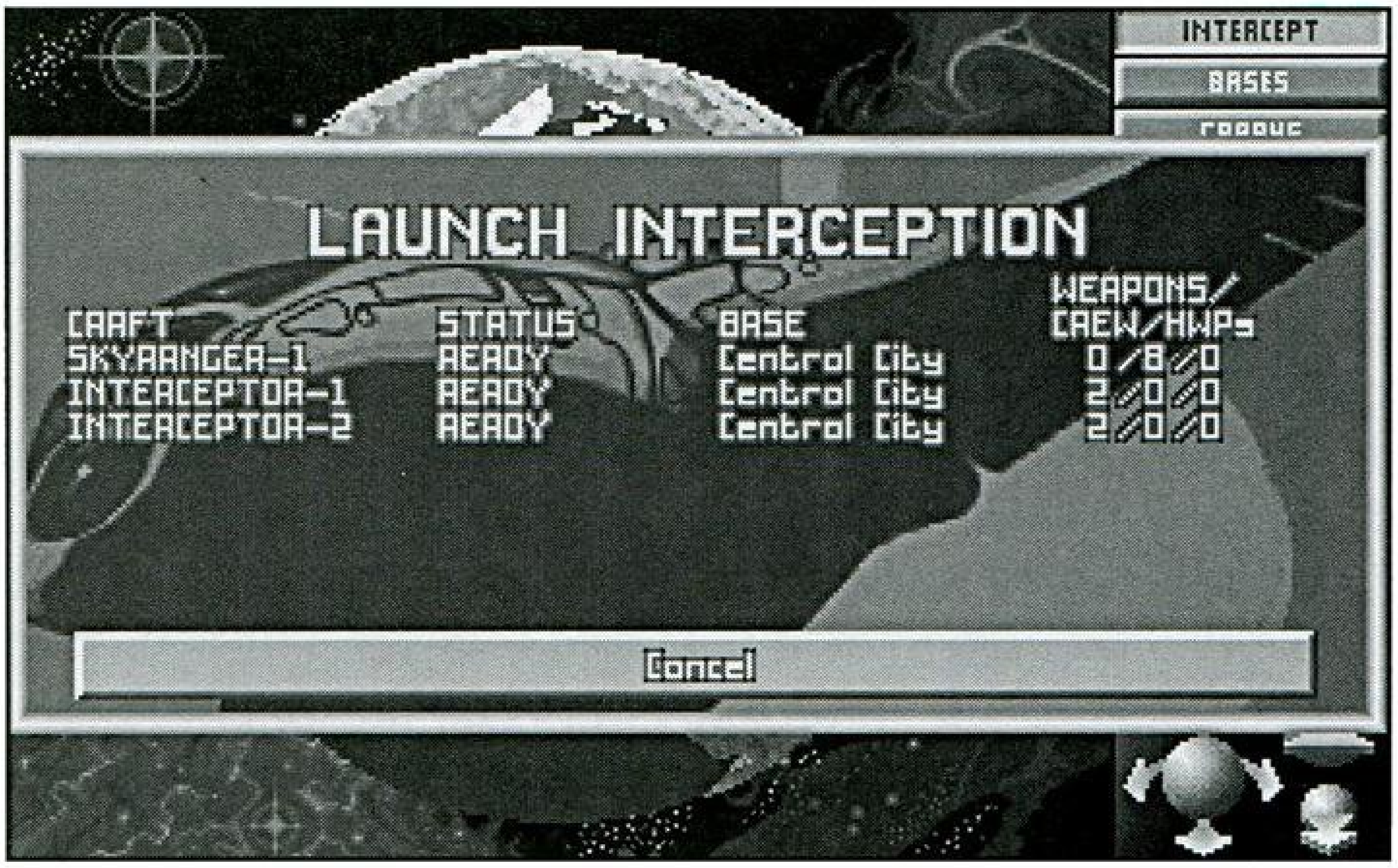
Now that you are tracking the enemy, the time has come to move into action. Your goal throughout the game is to acquire as much knowledge as possible about the aliens so that their evil plans can be stopped; the best way to do this is to study them firsthand.

The only contact you have with the aliens early in the game is through the UFOs they send to Earth on scouting, supply, and terror missions. You can't learn much about the aliens themselves by merely watching as their spacecraft whiz by you at high speeds, so you have to get them to stand still and let you take a look. At the beginning of the game, you rarely find a UFO on the ground. You are left, therefore, with only one alternative: Blow one out of the sky!

When you have begun tracking a UFO, click the Intercept button on the Geoscape Options menu. This step brings up the Launch Interception window (described in Chapter 2, "The Geoscape Screen"), shown in Figure 7-2.

This window lists all X-COM craft from every X-COM base in the world. From this list, choose an interception craft by clicking on it. Any of the following armed craft can perform UFO interceptions: Interceptors, Firestorms, Lightnings, and Avengers.

After you select the interception craft, you are prompted to select a target for the craft. You can choose any position in the



LAUNCH INTERCEPTION

CRAFT	STATUS	BASE	WEAPONS/ CREW/HWPs
SKYRANGER-1	READY	Central City	0/8/0
INTERCEPTOR-1	READY	Central City	2/0/0
INTERCEPTOR-2	READY	Central City	2/0/0

Figure 7-2
The Launch Interception window.

world as a target for the interception craft by clicking on the position you want on the 3-D globe on the Geoscape. To select the UFO as your target, click directly on the red blip. When you do, a message appears, asking you to confirm that you want to target the UFO. Click OK if this is the case.

When the interception craft (shown on the Geoscape globe as a yellow blip) begins to move away from the base, you can go about your business, taking care of the details of your bases, until the intercept craft reaches its target, or you can speed the progress of the intercept craft by increasing the rate of time passage. You do this by clicking on one of the buttons on the game-time controls on the Geoscape.

LOST TRACKING

If the UFO leaves the detection range of your base before your intercept craft is able to reach the UFO, you receive a message indicating that UFO tracking has been lost. When this happens, you have the option to go to the UFO's last known position, patrol the area in the immediate vicinity of your intercept craft's current position, or return the intercept craft to its base.

AIR-TO-AIR COMBAT

When the intercept craft reaches its target, air-to-air combat automatically begins. When the UFO is within your intercept craft's maximum detection range, the Air-to-Air Combat window appears, as shown in Figure 7-3.

The left half of this window shows the radar screen. The radar's scanning area is represented by the pulsating green cone. The UFO is represented by a pulsating blip that initially appears at the upper edge of the cone. Larger blips represent larger UFOs. To the left and right of the cone, icons represent the type of weapons carried by the intercept craft. The maximum range of each weapon is represented by a line extending upward and crossing into the radar cone.

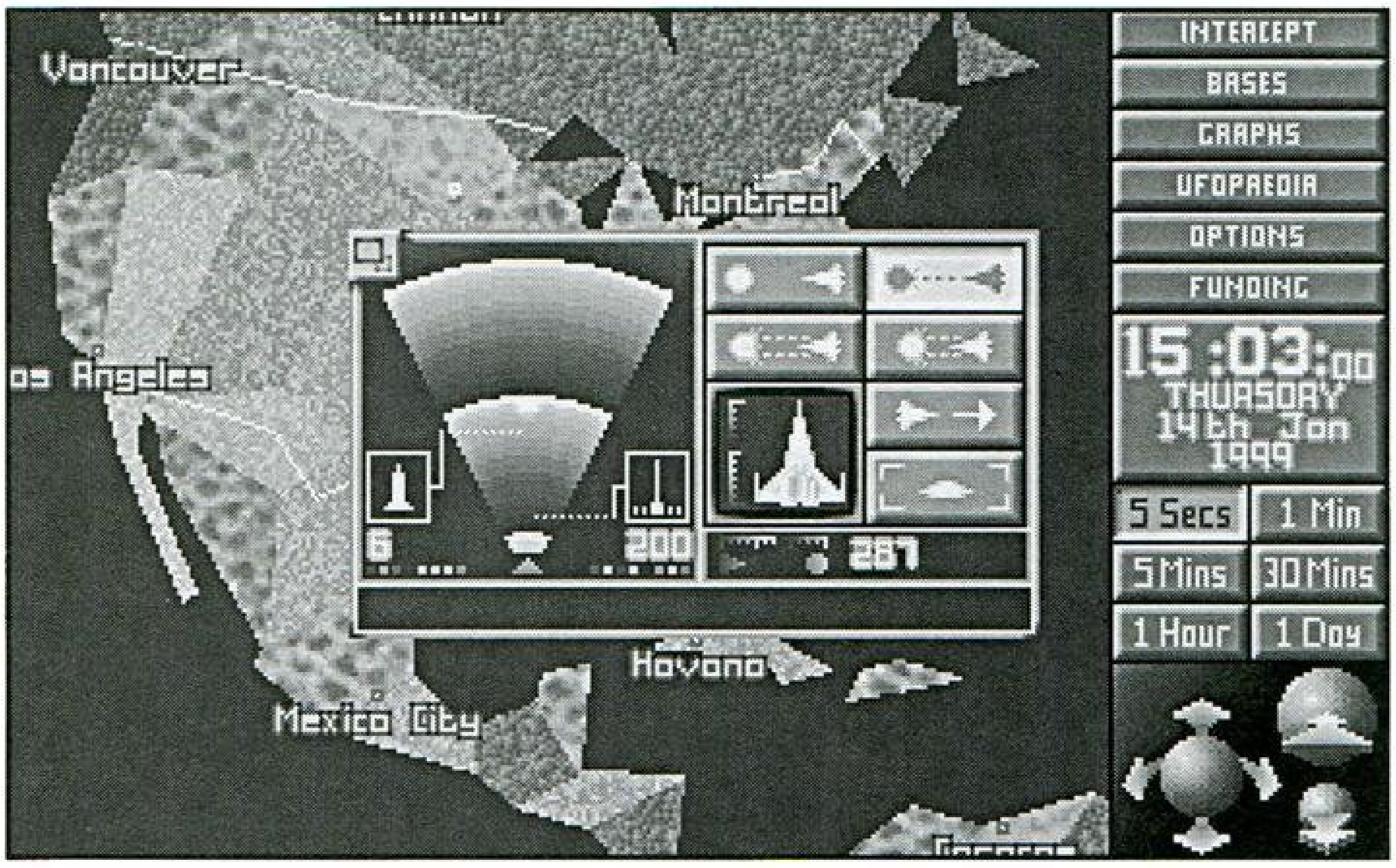

Vancouver
Montreal
os Angeles
Havana
Mexico City
6
200
287
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
15:03:00
THURSDAY
14th Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 7-3
The Air-to-Air Combat window.

The numbers below the icons show the number of shots remaining in each weapon.

The right half of the window shows an icon representing the type of interception craft, with a small scale to the left of it. The scale measures damage sustained by your craft. Each time the craft is hit, it begins to turn red. When the entire icon turns red, your intercept craft has been destroyed. Above and to the right of the craft icon are the interception controls.

The computer handles all the flight maneuvers and weapons-firing of air-to-air combat in the game. You are in control, however, of the overall strategy employed by the craft. The order buttons allow you to give your intercept craft the following instructions:

Standoff: Order the intercept craft to follow the UFO but to hold fire.

Cautious Attack: Order the intercept craft to close to maximum firing distance for each weapon and open fire. When you have two weapons with different ranges, the intercept craft closes to the maximum firing distance of the weapon with the longest range and continues firing until ammunition is expended or new orders have been received. It then closes to the maximum range of the second weapon and continues the attack.

Standard Attack: Order the intercept craft to close to the maximum range of the shortest-range weapon and begin firing at a standard rate.

Aggressive Attack: Order the intercept craft to close to the minimum possible range for the shortest-range weapon and begin firing all weapons simultaneously at the maximum rate.

Disengage: Order the intercept craft to break off its attack on the UFO and return to base.

View UFO: Replaces the Air-to-Air Combat window with a picture of the UFO the intercept craft has engaged (return to the Air-to-Air Combat window by clicking the left mouse button). Combat continues while you're viewing the UFO, so be cautious when you use this command.

Along the bottom of the window is the message box. It displays short messages confirming your commands when you click on the order buttons and informing you of the status of the UFO and the intercept craft itself.

In the upper left corner of the window is a Minimize Window button. It allows you to shrink the combat window so that it becomes an icon in the upper left corner of the Geoscape screen. When the Air-to-Air Combat window is minimized, combat continues. You now have access to the Geoscape menu controls, however, and you can perform other game tasks normally.

TIP

***Tip:** Don't save the game while you have Air-to-Air Combat windows minimized. (Just trust me on this one.)*

TIP

CHOOSING YOUR INTERCEPT CRAFT

The four types of intercept craft available in the game (the Interceptor, Lightning, Firestorm, and Avenger) are described completely in Chapter 4, "X-COM Hardware." All these craft are capable of performing intercept duties, but some are much better than others. All craft available in the game are listed in Table 7-1. (**Note:** The Skyranger is listed in this table for convenience, even though it is the only craft that cannot truly act in an intercept capacity.)

Table 7-1 X-COM Craft

X-COM Craft	Vehicle Type	Cost	Maximum Speed	Accel.	Fuel Capacity	Weapon Pods	Damage Capacity	Cargo Space	HWP Capacity
Sky Ranger	Transport	$500,000	760	2	1500	0	150	14	3
Interceptor	Fighter	$600,000	2100	3	1000	2	100	0	0
Lightning	Fighter/Transport	$600,000	3100	8	30*	1	800	12	0
Firestorm	Fighter	$400,000	4200	9	20*	2	500	0	0
Avenger	Fighter/Transport	$900,000	5400	10	60*	2	1200	26	4

*Requires Elerium-115 for fuel

At the beginning of the game, you have two Interceptors. These craft, when properly armed, can get you more than halfway through a game set to the easier levels. If you are extremely lucky, in fact, you may get all the way through the game by using nothing but Interceptors as intercept craft.

This isn't likely, however. The Interceptor is the weakest of the lot; it takes only 100 points of damage to destroy it. Interceptors hold up well against very small to medium UFOs, but they are likely to meet with quick destruction if they are forced to face anything larger.

When large UFOs begin appearing more frequently, you have to think about building some more advanced intercept craft. The more advanced craft, based on knowledge gained from the research of alien technology, are much stronger and faster than Interceptors.

The first of the advanced intercept craft that becomes available through research is the Lightning. It is more than an intercept craft: In addition to the capability to mount and utilize an air-to-air weapon, this craft can also carry soldiers. Unfortunately, although the Lightning is faster and stronger than both the Skyranger and the Interceptor, it is not efficient at either of its jobs. As a transport, it can carry 12 soldiers, but it is incapable of carrying any HWPs. As an intercept craft, it can mount only half the weaponry of the other ships in this class. Even though it can take more damage and costs the same as an Interceptor, it is best to stick with the basics until something better comes along. As far as using it as a transport craft, the Skyranger serves just as well (better, in fact) until the Avenger is available.

"Something better" is the Firestorm. This craft is the second of the advanced intercept craft available, and with plenty of scientists researching its construction, this technology is available just weeks after that of the Lightning.

Like the Interceptor, the Firestorm is an intercept-only craft. It can take five times the damage of the Interceptor and can move at twice the speed. It is capable of mounting two weapons, making it a formidable fighting machine. When this craft is available, you can begin using it as your primary intercept craft.

The Avenger is truly, as the research topic suggests, the "ultimate craft." It is a highly effective transport, with room to carry soldiers and as many as four HWPs, and it is a strong and capable intercept craft. It can outrun even an alien battleship, and it can take more than twice as much damage as a Firestorm can.

It would be tempting to replace all craft—transports and intercept craft alike—with Avengers, if not for two factors:

The price to build and operate these craft: At nearly a million dollars apiece, it is impractical to build a large number of these craft. As for operation, this craft can use as many as 60 units of Elerium-115 on every mission. If you were operating an entire fleet of these ships, it would deplete your Elerium supply rather quickly.

The potential cost in personnel and equipment if an Avenger is destroyed: Any soldiers and equipment assigned to the craft go with it wherever it goes. Therefore, if you have 14 soldiers and two HWPs on an Avenger that is destroyed while performing an intercept mission, you lose not only the craft but also the soldiers and tanks.

Even with these drawbacks, the Avenger is often the best choice for use as an intercept craft. Properly armed, it is capable of knocking a battleship out of the sky while sustaining only minimal damage in the process. Careful battle tactics can make the Avenger an excellent craft to use against larger UFOs.

Overall, the best tactic is to stick with Interceptors throughout the early part of the game. Keep your research going strong, and make sure that you study all the UFO components. By the time you have the ability and materials to build Firestorms, the UFO traffic has become, on the average, larger and more aggressive. Even so, keep using the Interceptors as long as you can, upgrading their weapons to more powerful ones as they become available. Perform upgrades to your intercept fleet by replacing destroyed Interceptors with Firestorms. You need at least one Avenger to complete the game, but don't use it on intercept missions unless no other ship is available to do the job or you are reasonably certain that you can win the battle without losing the craft and its cargo.

INTERCEPTING WITH SKYRANGERS

Although it may seem to be an odd choice, the Skyranger may be used as an intercept craft. Because it can carry no weapons, it is impossible for this craft to damage a UFO. What it can do is follow the UFO at a distance and wait for the UFO to land. When it does, the Skyranger can immediately land and begin a UFO assault mission.

The advantage to this tactic is that undamaged UFOs have more equipment and artifacts available for salvage than do UFOs that have been shot down and damaged. This strategy makes a UFO assault more profitable than a UFO recovery. Don't attempt this tactic, however, unless you have many soldiers to spare or your soldiers are well-trained. UFO assault missions are more difficult to complete because all the aliens aboard the vessel are still alive. In UFO recovery missions, several aliens are often killed in the crash.

ARMING YOUR INTERCEPT CRAFT

All the weapons available for intercept craft are described in Chapter 4, "X-COM Hardware". Their statistics are listed in Table 7-2.

Notice that the accuracy of craft weapons, unlike that of weapons carried by soldiers, is expressed not as a percentage but as a value relative to the accuracy of other craft weapons. The Avalanche missile, which has an accuracy of 100, for example, is ten

Table 7-2 Weapons for Intercept Craft

Weapon	Cost	Ammo Cost	Damage	Range (kilometers)	Accuracy	Reload Time (seconds)	Max. Rounds in Weapons Pod
Cannon	$30,000	$1240*	10	10	10	2	300
Stingray Missile	$16,000	$3000	70	30	70	15	6
Avalanche Missile	$17,000	$9000	100	60	100	20	3
Laser Cannon	$182,000	—	70	21	70	4	100
Plasma Beam	$226,000	—	140	52	140	6	100
Fusion Ball Launcher	$242,000		230	65	230	25	3

*Per 50 Rounds

times as accurate as the cannon, which has an accuracy of 10. The distance between your intercept craft and the UFO also affects accuracy, as does the size of the UFO. The closer the target and the larger the target, the more likely you are to hit it.

Your initial Interceptors are already armed with one cannon and one Stingray missile launcher apiece. Subsequent intercept craft that are purchased or built must have weapons mounted on them. Nothing comes as more of a surprise to a new player than to purchase a brand-new Interceptor and send it out on its first mission, only to have it catch up to the UFO and simply follow it all over the map without engaging it. This happens when you send an unarmed craft on an intercept mission. (The same thing happens when you send a Skyranger on an air-to-air intercept mission.)

To arm an intercept craft or to change the craft's armament, click the Equip Craft option on the Bases screen where the craft is stationed. This step displays a list of craft stationed at the selected base. Click on the intercept craft you want to arm, which brings up the Equip Craft screen, as shown in Figure 7-4.

The designation of the intercept craft appears at the top of the screen. As stated, this designation shows the type of craft (Interceptor, Lightning, Firestorm, or Avenger) and a number indicating the number of the craft in service. (The third Firestorm put into service, for example, is designated Firestorm-3.)

Listed below the designation are the percentage of damage the craft has taken and the percentage of fuel it is carrying. Any craft

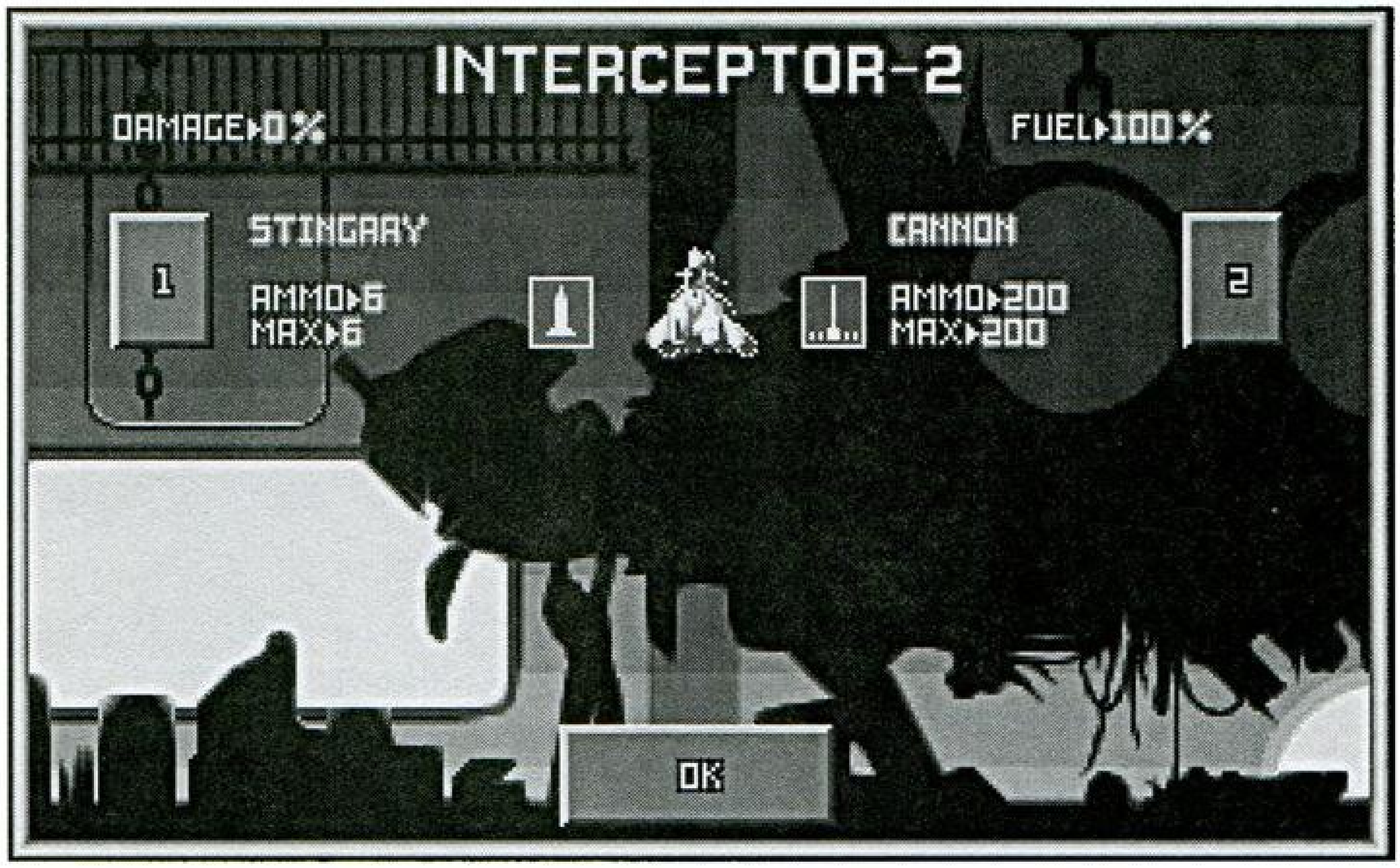


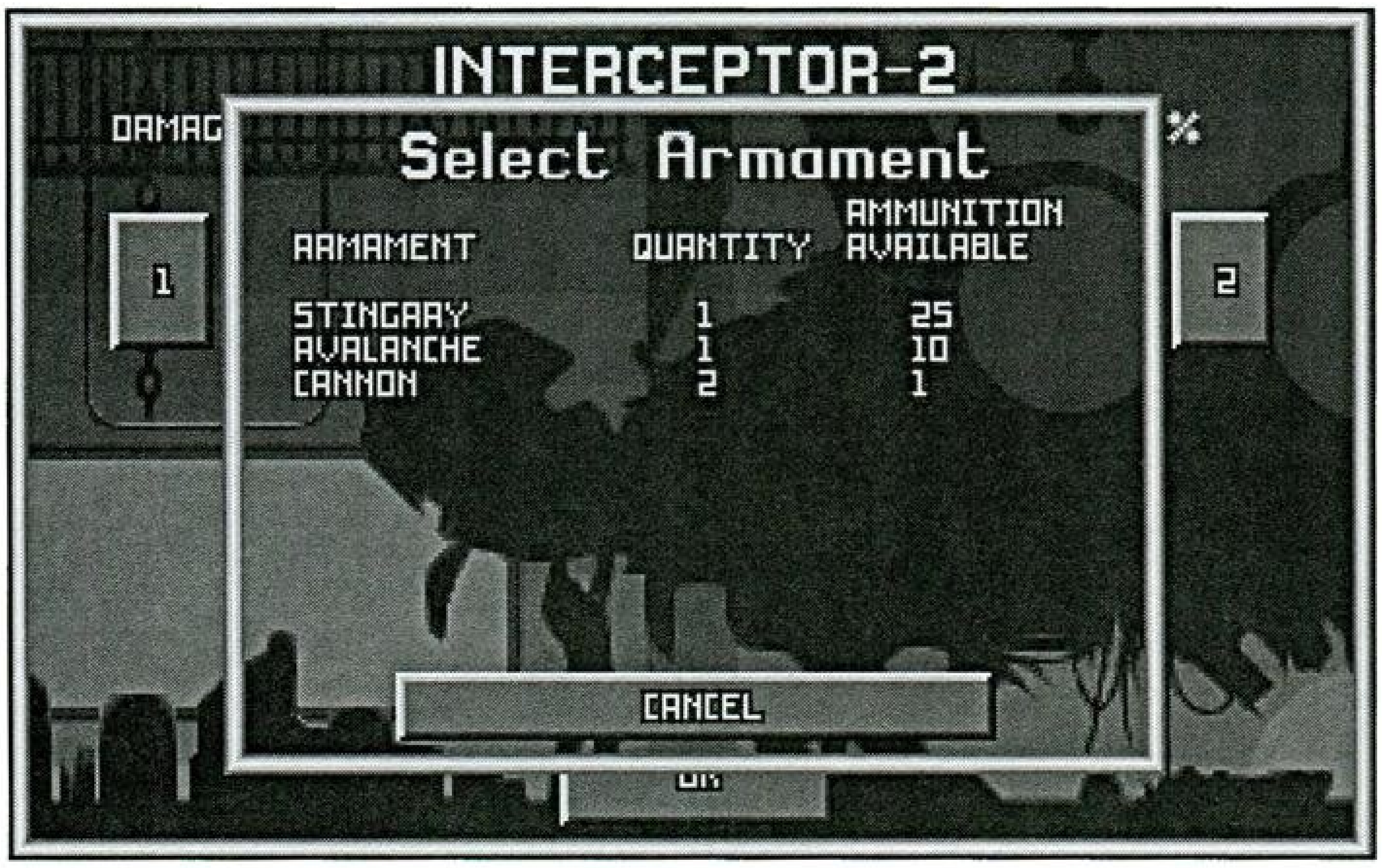
Figure 7-4 The Equip Craft screen.

that does not have 0 percent damage and 100 percent fuel cannot be launched until it is repaired or refueled. Repair and refueling operations are automatic.

Below the damage and fuel status, in the center of the screen, is an icon showing the craft. To the right and left of the craft icon are status displays showing the type of weapon mounted on each of the craft's weapons pods. If no weapons are loaded, the word *None* appears in the weapons display. (**Note:** Because it has only one weapons pod, the Lightning has only one weapons display. Both it and the Avenger have options for loading troops and equipment because they are transports as well as intercept craft. The process of loading personnel and equipment on these craft and the Skyranger is covered in Chapter 10, "Ground Assaults.")

Beside each weapons display is a numbered button. When you click one of these buttons, a list appears, showing all available air-to-air weaponry (see Figure 7-5).

To choose a weapon from this list, simply click the weapon you want to install. As soon as you choose a weapon, it is automatically mounted on the ship. If a weapon was already mounted in the selected pod, it is replaced by the newly chosen one. The weapon also begins reloading automatically.



Select Armament

ARMAMENT	QUANTITY	AMMUNITION AVAILABLE
STINGRAY	1	25
AVALANCHE	1	10
CANNON	2	1

Figure 7-5
Choosing weapons for an intercept craft.

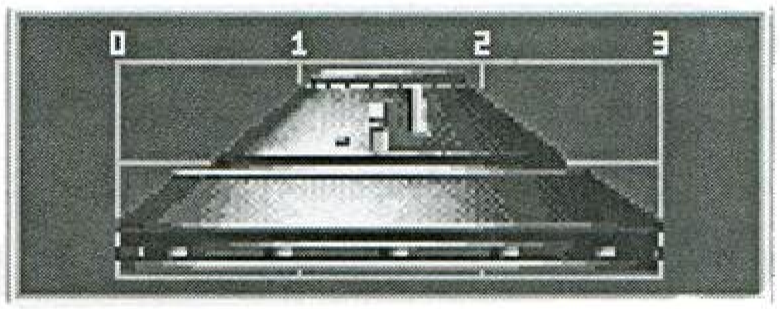
When the weapon data display is fully loaded, it shows the number of rounds loaded in the weapon and the maximum number of rounds that can be loaded. To the immediate right and left of the craft icon, a small icon is displayed to indicate the type of weapon system installed in each weapons pod. To exit from the Equip Craft screen, click the OK button.

Each intercept craft continues to utilize its installed weaponry until the weapons are manually removed and replaced with other weapons. The process of reloading all weapons takes place automatically when the intercept craft returns to its base. If there is insufficient ammunition to fully reload a weapon, you receive a message telling you this. In this case, your ground crews load all ammunition available for the weapon in question and await the purchase of a new supply. When new ammunition is bought, the weapon is automatically loaded to full capacity if it is at the base, or fully loaded the next time it returns to the base.

UFO TYPES

The aliens use a variety of craft to carry out their campaign against Earth. These UFO types range from small, one-pilot reconnaissance craft to huge, powerfully armed warships. This section lists the UFO types in the game, along with descriptions of each one.

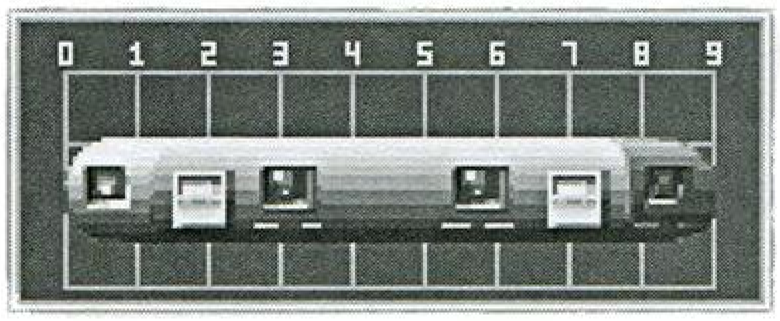
SMALL SCOUT



This small, unarmed vessel is used as a reconnaissance vessel. Its alien pilot makes a high pass over the Earth, scouting potential landing sites for larger UFOs. Its small size, lack of weapons, and relatively slow speed make it extremely vulnerable to attack. Because it is so fragile, interceptions by X-COM craft usually result in its destruction.

Small Scouts are seldom found on the ground because their one occupant cannot provide adequate defense for both itself and the craft.

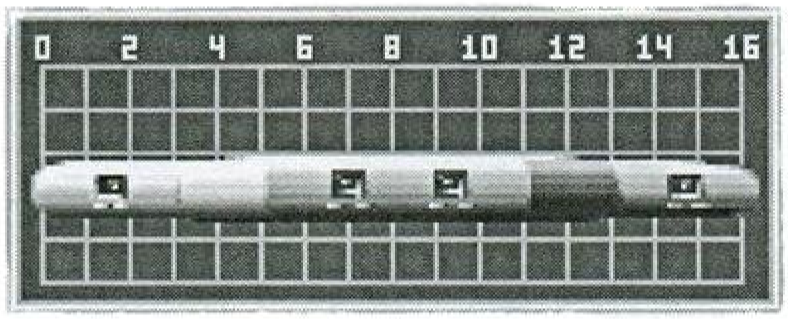
MEDIUM SCOUT



Another small reconnaissance vessel used by the aliens to scout potential landing sites, the Medium Scout is much more sturdy than its smaller counterpart but is still slow and weak compared to other UFO models. Its weaponry poses little threat to X-COM craft.

Medium Scouts sometimes boast a crew of as many as nine aliens, but the crew is generally smaller. These ships are usually found only on the ground as a result of a successful interception by X-COM craft. They are used primarily for fly-overs and seldom take part in ground-based missions.

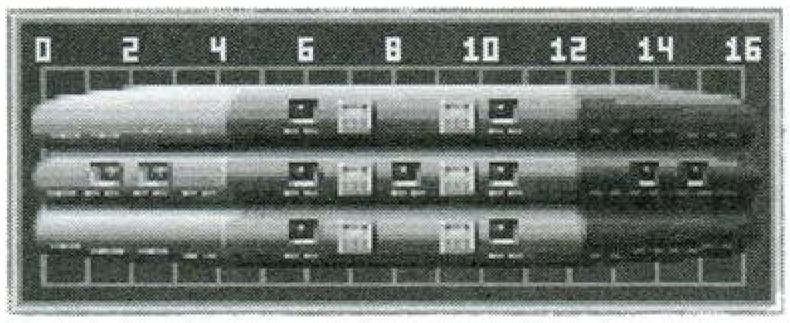
LARGE SCOUT



With longer-range weapons, higher speed, and a sturdier hull, the Large Scout is a much more hardy craft than other UFOs in the Scout class. As many as 13 aliens may be in this vessel's crew.

Unlike the other scouts, the Large Scout is used for more than just fly-overs and reconnaissance. The aliens use this versatile craft for a variety of missions, from abductions to base supply and retaliation. This is one of the most common vessels encountered by X-COM forces.

HARVESTER

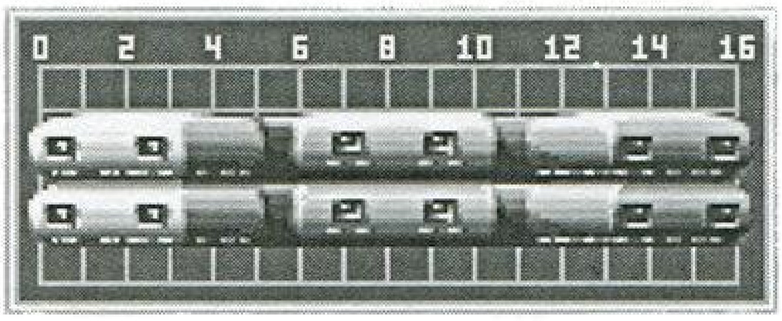


This craft is twice as strong, has twice the weapon power, and is nearly twice as fast as the Large Scout, but it lacks the other vessels' versatility. The reason is that the Harvester is built for a specific purpose.

The ship is equipped with a variety of devices used to collect and dissect biological specimens from the Earth. The specimens are retrieved and disposed of through a large trapdoor built into the deck. Genetic material and body parts removed from the specimens are stored in containers throughout the ship for use in experiments and, presumably, to be used as food.

Harvesters sometimes carry a crew as large as 21, which is always presided over by at least one alien leader. These ships and their crews pose a formidable challenge to X-COM.

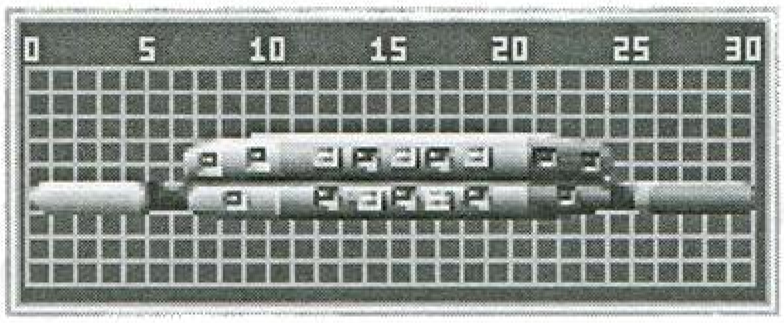
ABDUCTOR



A UFO with strength and characteristics similar to those of the Harvester, the Abductor is also a ship built for a specific purpose. Whereas the Harvester's task is primarily the retrieval of biological specimens to be used as food, the Abductor's job is to capture live human and animal subjects for the purpose of genetic experimentation. To this end, the craft is equipped with a complete examination suite for performing a variety of horrific experiments.

The Abductor boasts a crew of as many as 18 aliens, which is presided over by an alien leader. These vessels cause great unrest among the populace and governments of the world.

TERROR SHIP

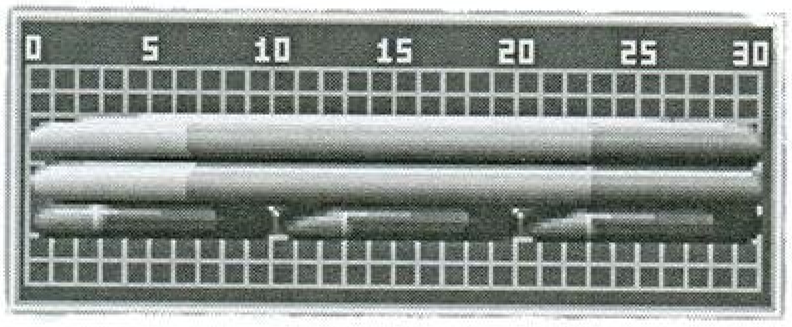


The Terror Ship has more than twice the damage capacity and three times the weapon power and range of the smaller Harvesters and Abductors. Its tremendous speed is second only to that of the Battleship in the alien fleet.

The mission of this vessel is to transport terrorist units in its large cargo bays and release them in the most heavily populated cities on Earth. There, the terrorists and other aliens wreak havoc among the terrified human population.

The crew of the Terror Ship consists of as many as 14 aliens, one of whom is an alien leader. In addition, as many as 10 terrorist units are also carried in the ship's cargo bays. The Terror Ship is a dangerous adversary both in the air and on the ground.

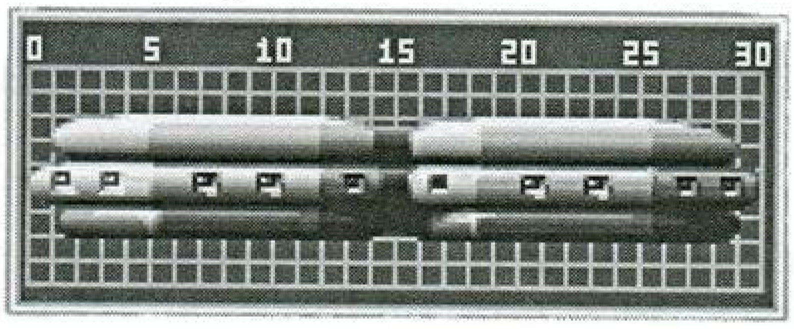
BATTLESHIP



The Battleship is the largest and most powerful alien craft. It has more than twice the damage capacity of a Terror Ship, strong weapons with tremendously long range, and a speed unmatched by any craft in the game with the exception of the X-COM Avenger. This vessel, the primary alien mission craft, can be used in any type of mission. Battleships are particularly common in raids on X-COM bases.

The battleship also has the largest crew of any vessel. As many as 22 aliens, including an alien commander and as many as 6 terrorist units, are found aboard. This vessel is difficult to combat in the air and requires an elite force of expert soldiers to effectively do battle with its crew in a ground assault situation.

SUPPLY SHIP



The Supply Ship is used in the construction of alien bases on Earth and to supply these bases after they have been established. It has greater damage capacity than any UFO except for the Battleship, but its weaponry is comparable to that of the Abductor and Harvester, and its speed is only a little faster than Scout-class vessels. It makes up for these weaknesses with its capability to carry large amounts of cargo, including alien food and reproductive chambers.

The Supply Ship carries as many as 20 crew members, including one leader. These vessels are relatively easy to defeat in the air. Increased UFO activity involving Supply Ships points to an alien base in the area. Following a Supply Ship often leads you to the location of an alien base.

UFO SIZE CLASSES

As shown in these descriptions, UFOs come in many different varieties. However, the only information you can get from detection equipment before acquiring the hyper-wave decoder is the general size of the UFO. After you have seen enough UFOs, the size shown by your detection systems can give you a good idea of what you are up against and allow you to formulate a plan for its interception.

Each type of UFO described here falls into one of five size classes: very small, small, medium, large, and very large. Each type of ship has different capabilities, but the size class itself gives you a good clue about the type of ship you are intercepting and its possible capabilities. Table 7-3 lists each UFO type and shows its size class and capabilities.

As explained, the size class of a UFO can be determined by even the simplest detection system. If you have a hyper-wave decoder at one of your bases, you can also tell which type of ship you are up against. But only through interrogation of alien engineers can you determine the performance and structural details of the alien craft (unless you have this strategy guide, of course).

The interior layout of each type of craft is distinctive. Complete maps of all UFO interiors are provided in Chapter 10, "Ground Assaults."

Table 7-3 Statistical Information for Each UFO Class

UFO Type	Size Class	Damage Capacity	Weapon Damage	Weapon Range	Max. Speed
Small Scout	Very Small	50	0	0	2200
Medium Scout	Small	200	20	120	2400
Large Scout	Small	250	20	272	2700
Harvester	Medium	500	40	176	4000
Abductor	Medium	500	40	160	4300
Terror Ship	Large	1200	120	336	4800
Battleship	Very Large	3000	148	520	5000
Supply Ship	Large	2200	60	228	3200

METHODS OF ATTACK

As shown earlier in this chapter, several methods of attack are available during a UFO interception. The type of attack you use depends on a number of factors, including the type of intercept craft being used, the type of weapons on the intercept craft, and the size and type of UFO you are intercepting.

The type of intercept craft you are using determines the amount of damage you can take before you are killed by the UFO's return fire. The type of weapon you use determines the maximum range you can remain away from the UFO and still be able to fire.

UFOs fire back at different ranges. The maximum range of UFO fire is based on the size of the craft: The smaller the UFO, the shorter the weapons range. When you're using a Cautious Attack against a small UFO, therefore, the risk to your intercept craft is minimal. A Cautious Attack also minimizes the chance of your intercept craft accidentally destroying a smaller UFO instead of forcing it to crash-land.

The drawback of using a Cautious Attack against smaller UFOs is that, because the range between the two craft is larger, the UFO has more of a chance to escape. This leads to either a long chase or a lost UFO, if it manages to get out of detection range. A good compromise is to keep one intercept craft armed with weaker weapons on hand at all times for the purpose of intercepting smaller UFOs. Using this weak craft in a Standard Attack should allow you to shoot down the UFO without destroying it and still be close enough to have a chance of easily catching up to the UFO if it attempts to escape.

When you attack larger UFOs, much more danger is involved. The range of the larger alien ships is much longer than that of smaller UFOs and usually longer than your longest-range weapon. This makes them a danger even during a Cautious Attack.

As with smaller UFOs, you should consider several factors. If you attack in cautious mode, you stand less of a chance of being hit. Your shots also have less chance to hit, however, so the battle takes much longer this way. Long battles mean more shots fired, and more shots fired mean that you can run out of ammunition or (more likely) be killed by a stray shot. A single shot from a battleship can destroy an Interceptor, and several hits can do significant damage even to an Avenger.

There are three ways to be successful at intercepting large UFOs. The first way is to attack by using only the strongest craft and weapons. An Avenger with a pair of plasma beams and attacking with a Standard Attack can usually take out a Battleship while sustaining only minimal damage in the easier levels. In higher levels, the UFOs tend to be more aggressive, and Battleships can usually cause enough damage to put an Avenger in the repair shop for a long time, or destroy it altogether.

The second method is to attack large targets with multiple intercept craft. This method causes the UFO to split its fire between your craft, giving you a much better chance to survive. To attack a target with multiple intercept craft, launch as many as four craft with the same UFO designated as the target. As each of the ships reaches the UFO and the Air-To-Air Combat window appears, click the Minimize button in the upper left corner of the window. A craft icon appears in the upper left corner of the Geoscape to represent the craft, as shown in Figure 7-6.

The minimized craft continue to follow the UFO. When all have arrived at the scene, click on each of the craft icons to initiate the

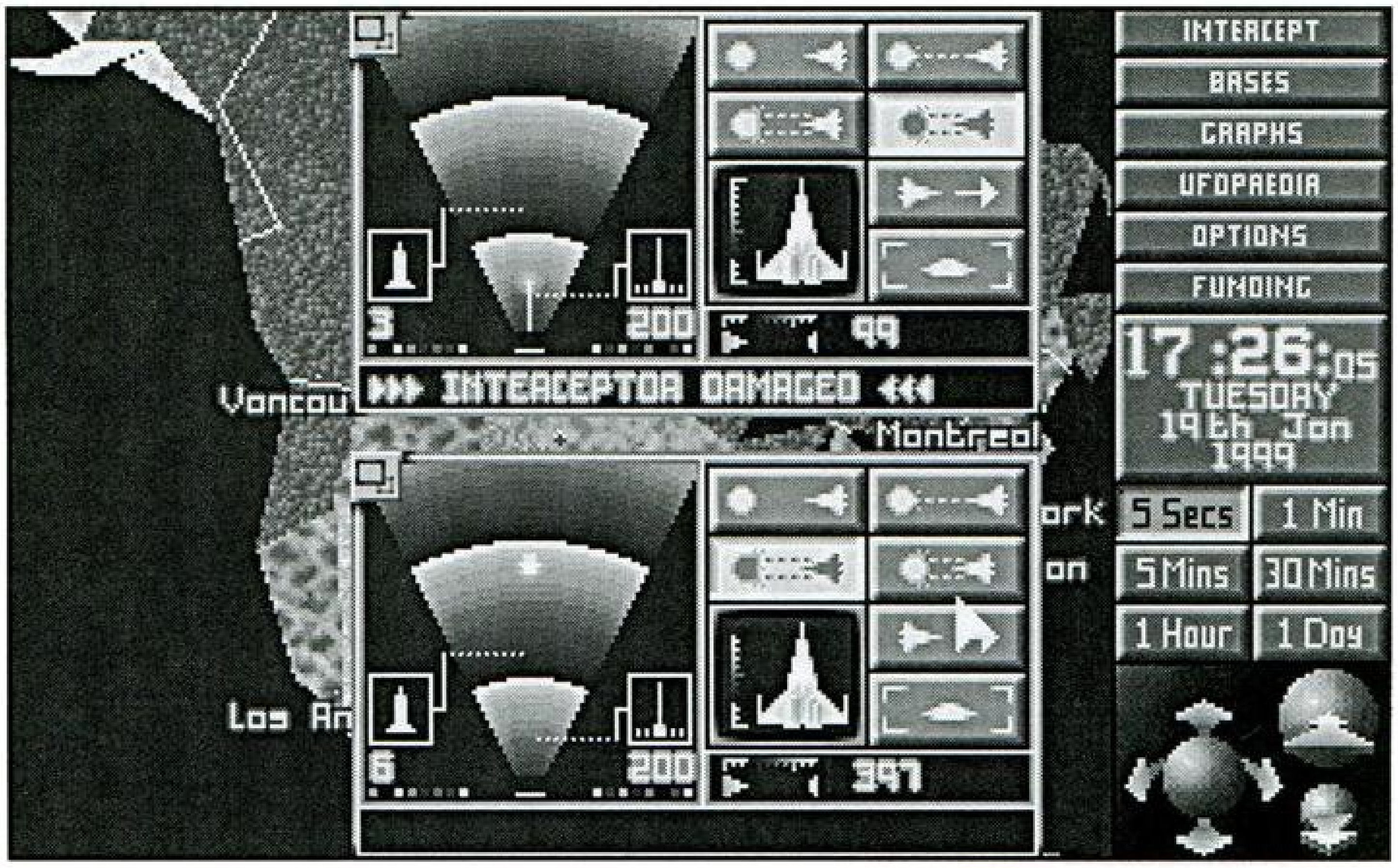

INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
17:26:05
TUESDAY
19th Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day
Vancou
▶▶▶ INTERCEPTOR DAMAGED ◀◀◀
Montreal
ork
on
Los An
3
200
99
6
200
397

Figure 7-6
Multiple intercept craft attacking a UFO.

battle, and give orders for each craft to launch a Standard Attack. With multiple targets to choose from, the UFO is forced to shift its weapons back and forth, greatly reducing the chances of losing any of the intercept craft. In addition, the combined weapons of your craft should make quick work of even the largest UFO. Just make sure that each of the attacking intercept craft is equipped with state-of-the-art weaponry. Even an Aggressive Attack can work when you're using multiple intercept craft, but although it may make the fight go faster, it also increases your chances of losing one or more intercept craft.

The final method for dealing with larger UFOs is to depend on luck. This is the least recommended method. Although it is definitely possible to make it through the entire game by using only your original two Interceptors, it is very unlikely. Even with the best weaponry available, a single shot from a larger UFO can destroy your ship. Depending on luck not only costs you money but also leaves you with long periods of down-time as you await the arrival or construction of a ship to take a destroyed intercept craft's place. You are much better off if you keep your fleet and weapons up-to-date and use caution and tact in intercepting UFOs.

SIDE EFFECTS OF UFO INTERCEPTIONS

In addition to the obvious effects of interceptions—destruction of UFOs, crash sites to be explored, and evil alien missions being brought to a premature conclusion—several other possible side effects may occur as a result of a successful UFO interception. Although there is a possibility that a successful interception may have no effect on alien activity, one of the following situations may occur as the result of your activities.

If the aliens are sufficiently impressed with your air-to-air combat prowess, they may retreat to rethink their strategy and cease all activity of that type for a time. This situation decreases the alien's score a little. It may also please the government of the country you have succeeded in protecting enough for it to increase its X-COM funding in light of the decreased UFO activity in its area.

The aliens may just be smart enough, of course, to realize that your intercept craft can't be everywhere at one time. In this case, the aliens cease UFO activity in the area near the interception and simply begin the same activity elsewhere in the world. This strategy doesn't do much to decrease the aliens' score, but from a purely financial standpoint, it may be profitable to have them move their activities to a less wealthy country.

Finally, if the aliens are sufficiently annoyed at having lost a UFO, they may become more aggressive as a result. When this happens, UFO activity in the area near the interception increases dramatically as the aliens attempt to find the X-COM base from which the intercept craft was launched. Because aliens are more aggressive at higher levels of difficulty, the chances increase based on the chosen difficulty level. The following list shows the percentage chance of the aliens beginning to actively search for your base in each level of the game:

Beginner:	4 percent
Experienced:	8 percent
Veteran:	12 percent
Genius:	16 percent
Superhuman:	20 percent

Chapter Eight

SOLDIERS, MOVEMENT, AND COMBAT

If the scientists and engineers are the brain of the X-COM operation, soldiers are the backbone. The scientists sit in their labs and research new technologies and the biological mysteries of aliens. The engineers sit in their workshops and build new weapons and equipment for use in defeating the aliens. But it is the soldiers, sent into the field to capture aliens and their technology, who put their lives on the line to keep Earth safe and to keep the scientists and engineers working.

SOLDIERS

In this chapter, you learn more about X-COM soldiers, and you learn how to move and control soldiers on the game's Battlescape.

RECRUITING SOLDIERS

Recruiting soldiers is as easy as purchasing craft, weapons, and equipment. From the Bases screen, click the Purchase/Recruit option to bring up the Purchase/Hire Personnel screen. The first item at the top of the list is Soldier. As when you purchase weapons and equipment, click the up arrow on the Soldier line of the list to increase the number of soldiers to recruit, and click the down arrow to reduce the number of soldiers recruited.

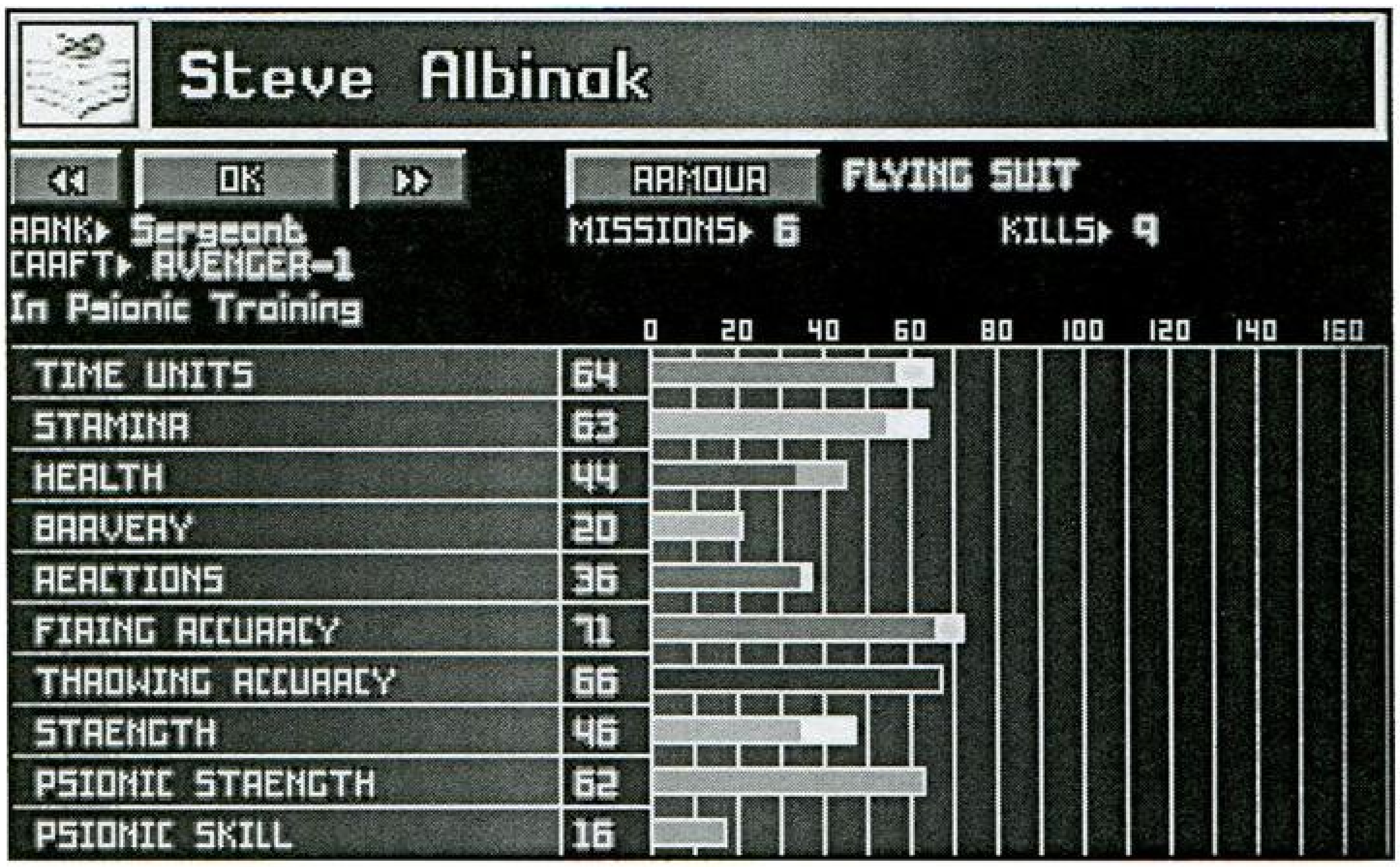
If you choose a number of soldiers that exceeds the amount of living space available in your base's living quarters, a message tells you that there isn't enough room to house the new soldiers. When this happens, you must either choose to recruit fewer people or build a new living quarters module at your base. When you have selected the number of soldiers you want to recruit, click the OK button to exit from the screen. The new soldiers arrive at your base the next day and are automatically added to the personnel roster of the chosen base. New soldiers cost $40,000 apiece to recruit and require a monthly salary of $40,000.

Soldiers may also be transferred between X-COM bases. To transfer soldiers from one base to another, click the Transfer option on the Bases screen. Mixed in with the listing of equipment, craft, and weapons at the chosen base are the names of all the soldiers stationed at the base. Find the soldier you want to transfer and click the up arrow to the right of the soldier's name. Repeat this procedure for each soldier you want to transfer. If you change your mind about transferring a soldier, click the down arrow on her line. When all soldiers have been chosen, click the Transfer button. A message appears, telling you how much the transfer will cost. Click OK to complete the transfer.

SOLDIER STATISTICS

All the soldiers assigned to a base are listed in the soldier roster of each base. To access the roster, click the Soldiers option on the Bases screen. Each soldier has his own unique characteristics. As with real people, these characteristics determine how the soldier reacts in a particular situation and how well she can perform certain tasks in the game. To see the statistics of a soldier, click the soldier's name on the roster screen.

When you click on a soldier from the roster, the Soldier Statistics screen appears, as shown in Figure 8-1. This screens shows all the vital information that makes up a soldier's "personality."



Steve Albinak

ARMOUR FLYING SUIT

RANK▸ Sergeant

CRAFT▸ AVENGER-1

In Psionic Training

MISSIONS▸ 6

KILLS▸ 9

TIME UNITS	64
STAMINA	63
HEALTH	44
BRAVERY	20
REACTIONS	36
FIRING ACCURACY	71
THROWING ACCURACY	66
STRENGTH	46
PSIONIC STRENGTH	62
PSIONIC SKILL	16

Figure 8-1 The Soldier Statistics screen.

In the top left corner of the screen is the soldier's rank insignia, with the soldier's name to the right. Each soldier is automatically given a name that has been randomly generated by the game. If you want to change the soldier's name, click in the name box. A cursor appears to the right of the name. To enter a new name, Backspace over the old one, type the name of your choice, and press the Enter key.

Below the soldier's name are several control buttons. The right- and left-arrow buttons enable you to scroll through the Statistics screens of all your soldiers. The Armor button enables you to choose armor for the soldier from your available supplies. (Armor is explained in detail later in this chapter.) When you click the OK button, you exit from the Soldier Statistics screen and return to the soldier roster.

The following information is listed for each soldier on his Soldier Statistics screen:

- **Rank:** The military rank held by the soldier (rank is fully explained later in this chapter).
- **Craft:** The transport craft the soldier is assigned to (if any).
- **Missions:** The number of missions the soldier has been a part of.
- **Kills:** The number of aliens the soldier has personally killed.

- **Time Units:** The number of game time units (TUs) the soldier has available each turn. The number listed here is the optimum number; the number of TUs available in a turn is affected by a number of factors, including fatigue and injury. (TUs are discussed fully later in this chapter.)
- **Stamina:** The amount of energy the soldier has at the beginning of a mission. Stamina decreases over the course of a mission as the soldier performs tasks. (Note: Stamina is referred to as Energy on the Soldier Data screen, which can be accessed during combat. These two statistics are identical.)
- **Health:** The soldier's current health. Health does not decrease unless the soldier is injured in battle.
- **Bravery:** How brave the soldier is in the face of danger. A higher bravery level results in higher morale on a mission and, therefore, less likelihood of panicking or going berserk during combat.
- **Reactions:** The soldier's reaction time. Soldiers with high reaction times often have the opportunity to fire snap shots during the alien's turn in combat.
- **Firing Accuracy:** A rating of the soldier's ability to fire a ranged weapon. This ability increases with experience.
- **Throwing Accuracy:** A rating of the soldier's ability to throw an object, such as a grenade. This ability increases with experience.
- **Strength:** The physical strength of the soldier, which affects her carrying capacity and how far objects may be thrown.
- **Psionic Strength:** A measure of the soldier's natural ability to defend against psionic attacks. Psionic strength remains constant throughout the game.
- **Psionic Skill:** A rating of the effectiveness with which the soldier can use his inherent psionic ability. Psionic skill can be increased through training.

Each of these skills is represented by both a number and a bar graph. The number shown is the current level of the attribute. This level is also represented by the colored bar in the center of the hollow graph bar. The outline of the bar representing each item on the

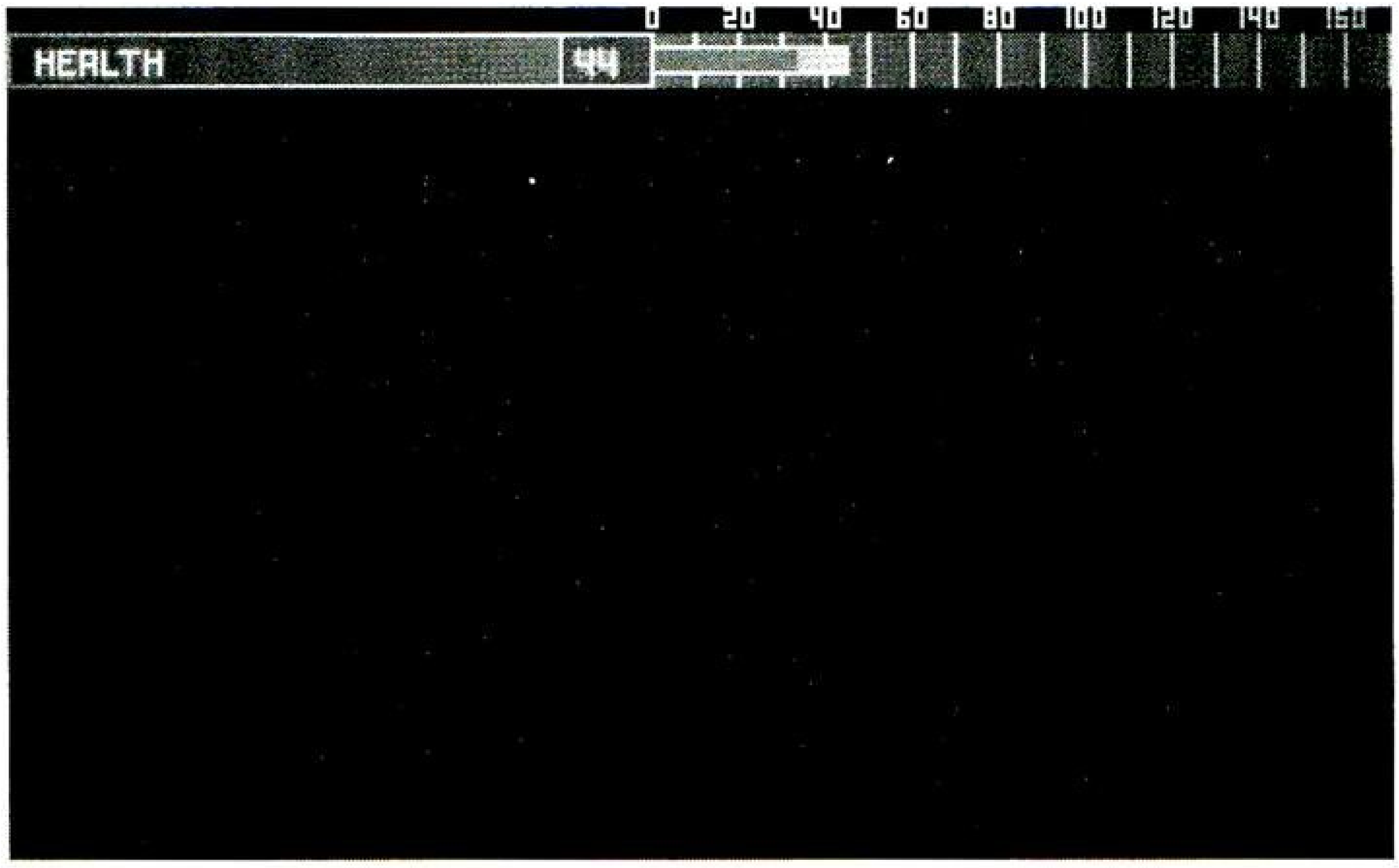


Figure 8-2 Interpreting a soldier's health level.

graph reflects the rating of the soldier when he is in perfect health. Figure 8-2 shows how statistics are represented on the graph.

The "Average" Soldier

In the real world, every person is endowed with a different set of physical attributes and skills which make that person unique. In X-COM, this is also true of the soldiers you recruit. Some soldiers tend to be above average, and some fall far below average.

Table 8-1 shows the possible range of statistic scores of newly recruited rookie soldiers.

Table 8-1 Possible Range for Rookie Statistics

Statistics	Skill Range
Time units	50 to 60
Stamina (energy)	40 to 70
Health	25 to 40
Bravery	10 to 60
Reactions	30 to 60
Firing accuracy	40 to 70
Throwing accuracy	50 to 80

This table lets you see at a glance which new soldiers are above and below average. Above-average soldiers should become your front-line troops. Below-average soldiers should probably be sacked immediately, and a new soldier should be recruited in her place. Doing this may seem like a waste of $40,000, but keeping a soldier who is far below average is a waste of $40,000 every month!

Although it may sound a little cold-blooded, there is one way that below-average soldiers can become useful members of the community: Send these soldiers out as your point men when you're moving into unexplored areas of a battle site. The useless rookie draws alien fire, giving away the positions of hidden aliens while keeping your more skilled soldiers safe. If you have to lose someone on a mission, at least make it someone who isn't valuable. (Besides, the soldier may get lucky and survive anyway.)

When you're deciding whether a solder is worth keeping, be sure to examine all statistics and weigh them as a whole. You may be tempted to judge the soldier strictly on combat-related skills. But even if a soldier has the highest firing accuracy in your entire squad, he is useless to you if his bravery is so low that he runs away every time the battle turns against him. Also useless is a soldier who has the highest bravery rating in the squad but who is unable to carry a weapon any larger than a pistol because her strength is so low. The best possible soldier is one who is average or above average in every statistic.

Improving a Soldier's Statistics

Although some statistics are fixed and do not change over the course of the game, others may be improved through practice and experience. When skill improvement takes place, points are automatically added at the end of a ground assault mission in which the soldier uses the skill in question. Because of random factors involved, these increases do not take place after every mission. The following list shows the soldier statistics that can be improved:

Firing/Throwing Accuracy: May increase if these skills were used in battle

Reactions: May increase if the soldier performs opportunity fire

Bravery: May increase if the soldier's morale falls below 50 but she does not panic

Psionic Skill: May increase if the soldier performs psionic combat (more likely if the attack is successful)

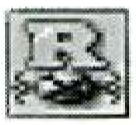
If any of these actions is performed by a soldier during a ground assault, one or more of the following statistics may increase also:

Time units
Health
Stamina (energy)
Strength

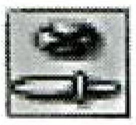
RANK

The ranking system for X-COM forces is a great deal different from that of military forces. In addition to the fact that the ranks themselves differ from those of present-day armed forces, rank advancement is handled in an entirely different and (perhaps) rather random way.

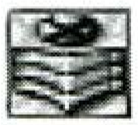
Advancement to higher ranks is based nominally on performance, but mostly on the number of soldiers currently employed worldwide by X-COM. Promotions are assessed at the end of a ground assault mission, whether the mission was a success or a failure. The following list shows the X-COM ranking system and symbols, from lowest rank to highest, along with the requisite requirements for achieving each rank:



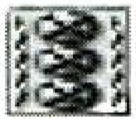
Rookie: The lowest rank, where all new recruits begin.



Squaddie: The rank a rookie is promoted to as soon as she has some combat experience



Sergeant: The rank the most experienced squaddie is promoted to if a position is vacant. (There is one sergeant for every five soldiers.)



Captain: The rank the most experienced sergeant is promoted to if a position is vacant. (There is one captain for every 11 soldiers.)

Colonel: The position the most experienced captain is promoted to if a position is vacant. (There is one colonel for every 23 soldiers.)

Commander: The highest leader in the X-COM forces. There can be only one commander at any given time. When there are at least 30 soldiers, the most experienced colonel is promoted.

As you can see, promotion has much less to do with the actions taken by your soldiers than it does with the number of soldiers you have. In fact, soldiers do not have to have any combat experience whatsoever to be promoted. Suppose that you begin a new game and recruit 22 soldiers (for a total of 30). After shooting down your first UFO, you send a full complement of 14 soldiers to the crash site aboard a Skyranger. As long as each soldier leaves the Skyranger and engages in combat with an alien (either firing at the alien or having the alien fire at the soldier), every soldier on the mission is promoted from rookie to squaddie.

Now, because of the number of soldiers you have, five of the squaddies are automatically raised in rank to sergeant (one sergeant for every five soldiers). Again, because of the number of soldiers you have, two of these sergeants are automatically promoted to captain (one captain for every 11 soldiers). This promotion opens up vacancies for two more sergeants, so two more squaddies are promoted. So, on a single mission, it is possible to rise from the rank of rookie directly to the rank of captain with only minimal combat experience. The most difficult promotion to achieve in the game is the promotion from rookie to squaddie, because it requires that a soldier engage in combat. After a soldier has become a squaddie, she can theoretically be promoted just by standing in the back of a Skyranger every mission and waiting for the ranks to grow.

The "promotion by numbers" method used in X-COM is something a new player should be familiar with right away. The most important thing to remember is that it does not necessarily follow that your higher-ranking soldiers are better fighters. If you continually increase the size of your fighting force, in fact, a soldier with only one combat mission under his belt can conceivably become the X-COM commander.

Keeping that warning in mind, the promotion system is a feature of the game that can work greatly to your advantage. Having a high-ranking officer along on a mission increases the morale of the lower-ranking troops and makes them less likely to panic and go berserk. Getting a few soldiers up to high rank, as described earlier, gives you a good pool of officers to work with. If you send along one or two with each crew, the soldiers' overall performance greatly improves.

Be careful not to take along too many officers, though, and make sure that they stay out of harm's way if possible. The morale of low-ranking soldiers decreases much more when a high-ranking officer is killed on a mission than if a rookie or a squaddie is killed. The percentage of additional morale that is lost when officers are killed is shown here:

- Sergeant: 20 percent
- Captain: 30 percent
- Colonel: 50 percent
- Commander: 75 percent

In other words, if your soldiers lose 10 points of morale when a rookie or squaddie dies, they lose 12 points when a sergeant dies, 13 points when a captain dies, 15 points when a colonel dies, and 17.5 points when a commander dies.

Take one or two officers along to improve morale, and allow the lower-ranking troops to do most of the fighting. That way, the soldiers get a morale boost from the officer's presence without risking the morale that is lost if the officer is killed.

COMBAT SKILLS

Combat training for X-COM soldiers is strictly of the "on-the-job" variety. A soldier's normal combat skills are reflected in his firing accuracy and throwing accuracy scores, as shown on the Soldier Statistics screen. As these skills are used in combat situations, they increase and reflect the experience gained. This skill increase is assessed at the end of each ground assault mission.

The details of how combat skills affect combat ability are covered later in this chapter.

PSIONIC SKILLS

Psionic skills involve the use of mind control as a weapon. Through the use of a thought-amplification device, thought waves are projected from a distance. This technique allows someone to use her own thoughts to control the actions of others.

Although some rudimentary study of psionic skills such as telepathy and telekinesis have been performed by the scientists on Earth, alien races have developed psionics to the level just described. Through the use of psionics, alien forces can control human actions. A soldier can be overwhelmed by uncontrollable fear, for example, or, in more extreme circumstances, aliens can take over the mind of the human target and cause him to turn and fire on his own people. This form of attack can be very effective. In fact, if the alien has a very high natural psionic skill and the soldiers have relatively low psionic strength, a psionic attack is likely to succeed every time.

Fortunately, this form of attack is available for humans also. After X-COM scientists are able to interrogate an alien that possesses psionic powers, the technology can be developed to give you the ability to develop your soldiers' psionic skills.

PSIONIC TRAINING

To begin the development of your soldiers' psionic skills, you must first construct a psi-lab at one of your bases. The psi-lab evaluates a soldier's natural psionic strength and then develops the soldier's skills in putting that strength to use. The statistics for psionic strength and psionic skill do not appear until a soldier begins his psionic training.

After you have built a psi-lab, you can begin training soldiers. You have an opportunity to assign soldiers to psionic training at the beginning of each month. After the end-of-month status report appears, the Psionic Training screen appears, as shown in Figure 8-3.

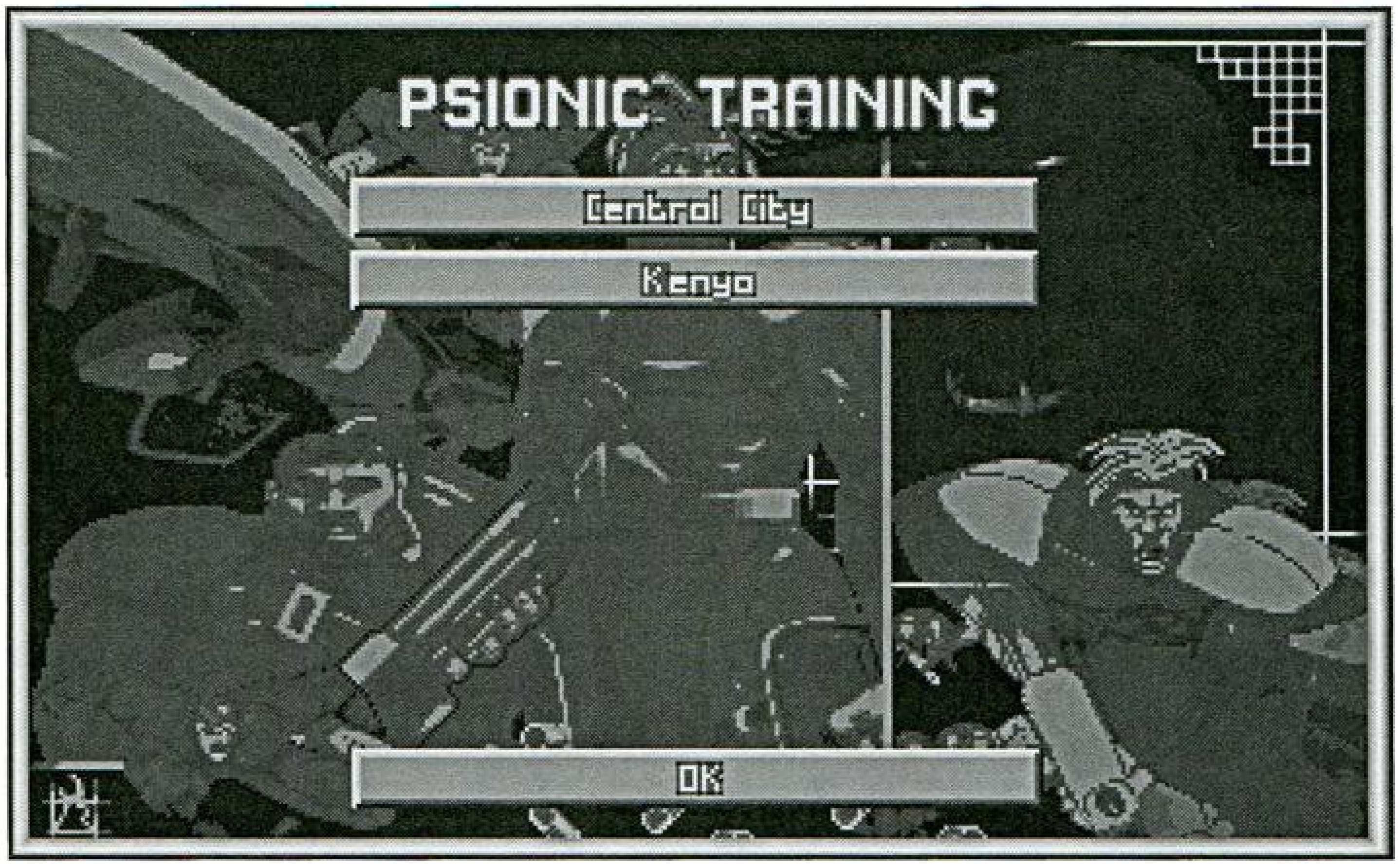
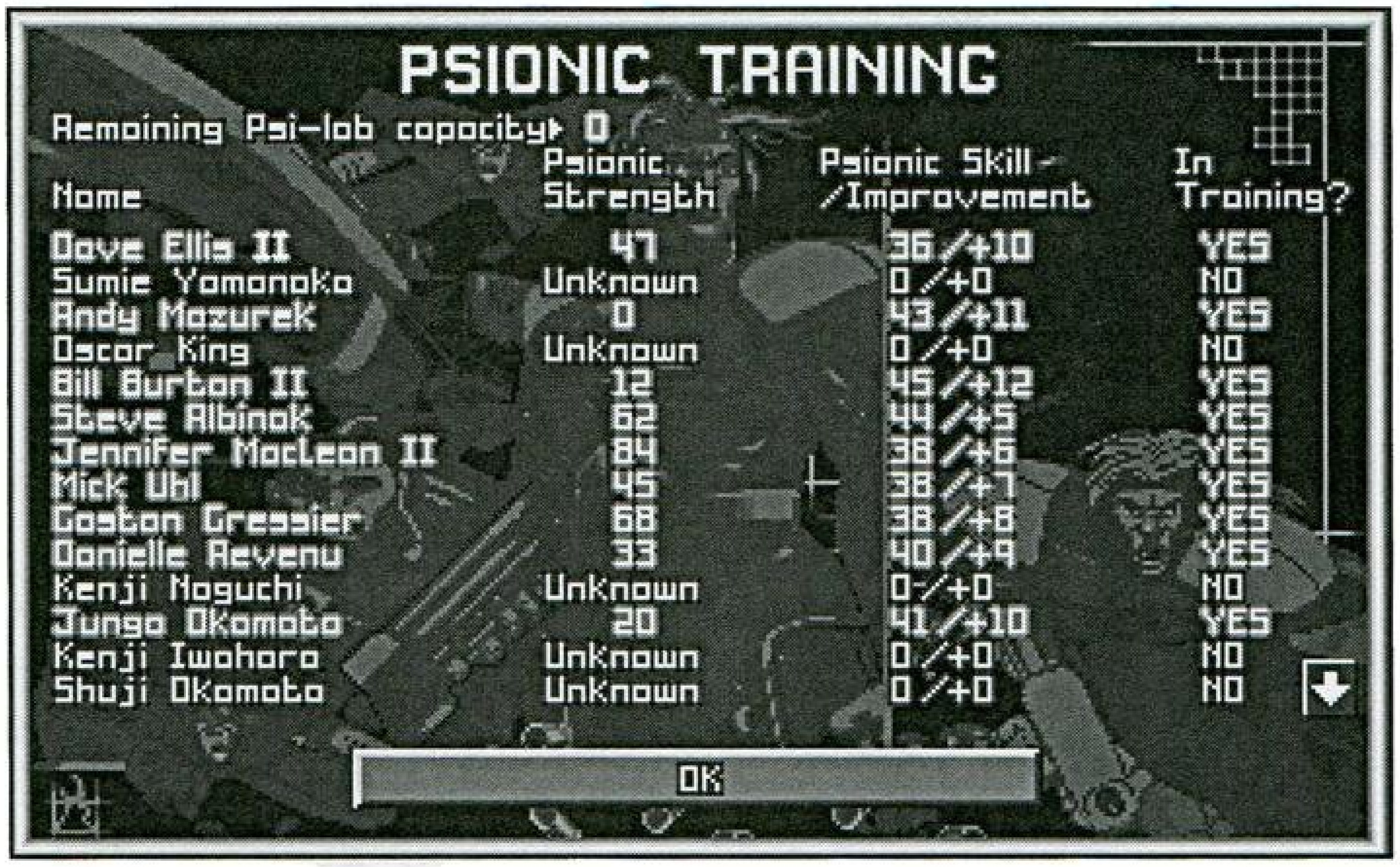


Figure 8-3
The Psionic Training screen.

This screen lists all your bases. To assign a soldier to training, click on the name of the base where the soldier is stationed. This step brings up the Assign Soldiers to Psionic Training screen, as shown in Figure 8-4.

This screen lists all the soldiers at the chosen base, along with the following information:



Remaining Psi-lab capacity> 0

Name	Psionic Strength	Psionic Skill/Improvement	In Training?
Dave Ellis II	47	36/+10	YES
Sumie Yamanaka	Unknown	0/+0	NO
Andy Mazurek	0	43/+11	YES
Oscar King	Unknown	0/+0	NO
Bill Burton II	12	45/+12	YES
Steve Albinak	62	44/+5	YES
Jennifer Macleon II	84	38/+6	YES
Mick Uhl	45	38/+7	YES
Gaston Gressier	68	38/+8	YES
Danielle Revenu	33	40/+9	YES
Kenji Noguchi	Unknown	0/+0	NO
Junga Okamoto	20	41/+10	YES
Kenji Iwahara	Unknown	0/+0	NO
Shuji Okamoto	Unknown	0/+0	NO

Figure 8-4
Assigning soldiers to psionic training.

Capacity: Number of open spaces remaining in the psi-lab

Psionic Strength: A measure of the soldier's natural ability to defend against psionic attacks. Psionic strength remains constant throughout the game; it cannot be improved through training. This ability remains unknown until the completion of one month of psionic training.

Psionic Skill/Improvement: Shows two statistics — the soldier's ability to use a psi amp in combat and the amount of skill improvement achieved in the last month of completed psionic training. Each soldier has a skill/improvement of 0/+0 until the completion of one month of psionic training.

In Training?: Indicates whether the soldier is assigned to psionic training

To assign a soldier to training, click on the soldier's name. It is better to concentrate psionic training on soldiers who have a high psionic strength. These soldiers not only have a high resistance to psionic attacks but also tend to learn psionic combat skills at a faster rate. This is impossible to determine, of course, until a month of training has passed. But if you see that some of your soldiers have relatively low psionic strength, remove them from training immediately and replace them with soldiers who are more powerful.

In addition to the psionic skill improvement gained through psionic training, psionic skill is also improved through experience, as the soldier uses her psionic ability in combat.

The use of the psi amp in combat is detailed later in this chapter.

ARMOR

Armor makes the difference between a successful ground assault and an X-COM soldier abattoir. No technology exists for building armor when the game begins; no Terran material is strong enough to withstand even the weakest of enemy weapons. With the discovery of alien alloy technology, which should come relatively early in the game, you can begin protecting your troops when they go into combat.

Each type of armor is described in detail in Chapter 4, "X-COM Hardware." The vital statistics of each type are listed in Table 8-2.

Table 8-2 Types of X-COM Armor

Armor Type	Cost	Front Armor	Left Armor	Right Armor	Rear Armor	Under Armor
None	—	12	8	8	5	2
Personal Armor	$22,000	50	40	40	30	30
Power Suit	$42,000	100	80	80	70	60
Flying Suit	$58,000	110	90	90	80	70

As you can see, even the most basic type of armor provides considerably more protection than no armor at all.

Of the armor that is available, the power suit is the most cost-efficient. It provides the soldier with protection that is considerably better than personal armor, and it is much less costly in terms of both cash and resources than a flying suit is. Power suits should be the primary armor your soldiers use.

The flying suit has some important tactical advantages, however, and should not be completely ignored. It provides a method for a soldier to rise above the battlefield and survey the landscape from a better point of view. This ability enables you to send up a scout who can see from a greater distance any aliens who are hiding than a unit on the ground can. Also, some alien species must be in physical contact with their victims in order to attack. Conveniently enough, every alien of this type is also incapable of flight. If you suspect that you will be up against these creatures in a ground assault, send in a squadron of soldiers in flying suits.

MOVEMENT

During the Ground Assault portions of the game, most of your time is spent moving your soldiers as they search for aliens and perform combat operations. X-COM has a number of rules covering movement, and a thorough understanding of movement rules and strategies is very important if you want to play the game successfully.

THE BATTLESCAPE

All troop movement and combat in X-COM: UFO Defense takes place on the Battlescape screen. This screen, shown in Figure 8-5, is a multiplane, 3-D map that shows the battle area from an angled, overhead perspective.

The Battlescape consists of two or more levels. Each level is approximately the height of a soldier. The levels are numbered in ascending order, with level zero as ground level. UFO recoveries, UFO assaults, and terror missions begin with all soldiers and HWPs on level one, inside the transport craft one level above the ground. Indoor missions (alien base assaults and X-COM base defenses) begin with soldiers scattered between levels zero and one. (Both X-COM and alien bases consist of only two levels.) Figure 8-6 shows a typical outdoor Battlescape from a side view, to illustrate the concept of the multiplanar battlefield.

THE BATTLESCAPE CONTROL BAR

No matter what type of ground assault is taking place, the Battlescape control bar in the bottom quarter of the screen remains the same. These controls are illustrated in Figure 8-7.

Each of the displays and buttons on the control bar are explained in this section.

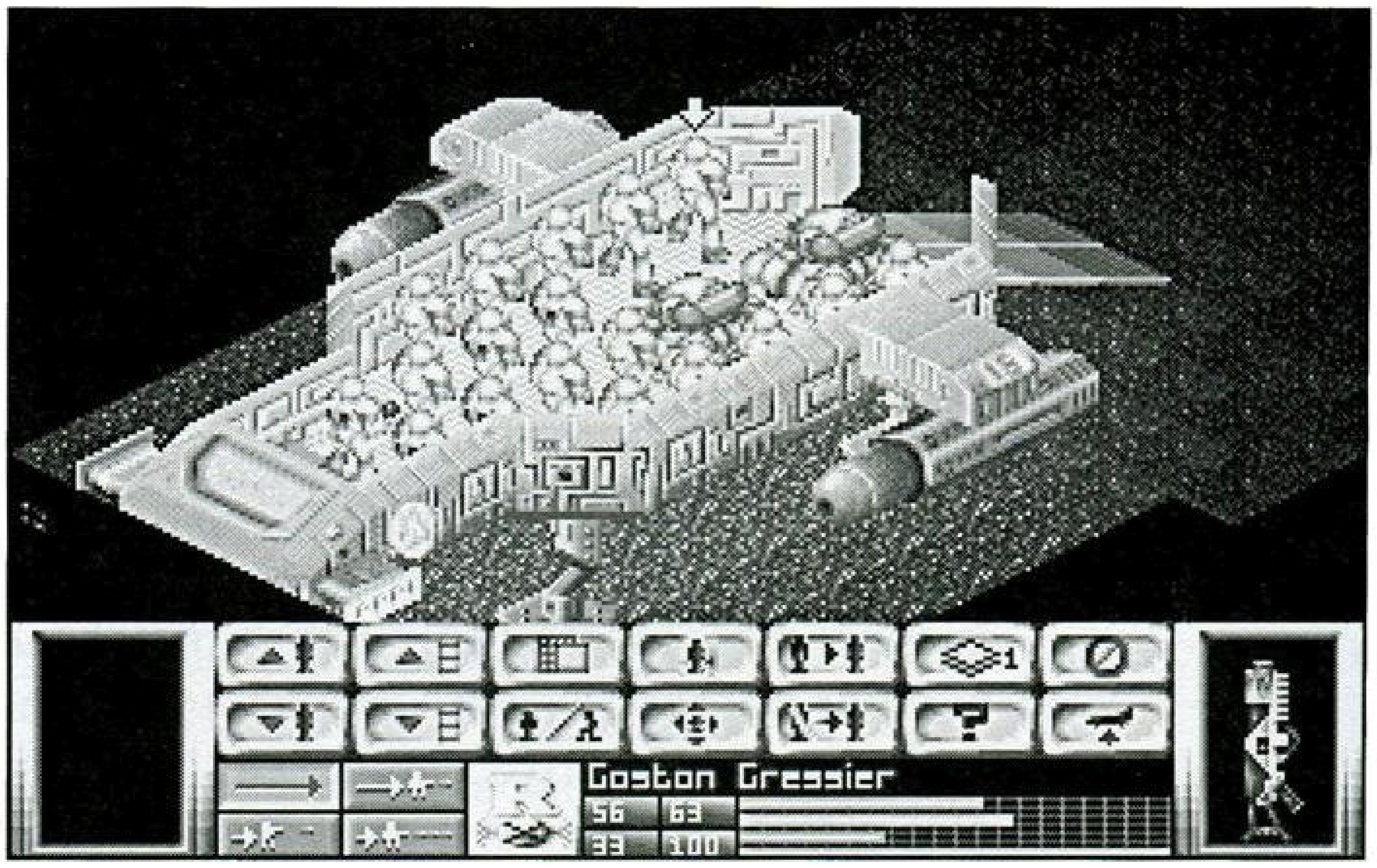


Figure 8-5
The Battlescape screen.

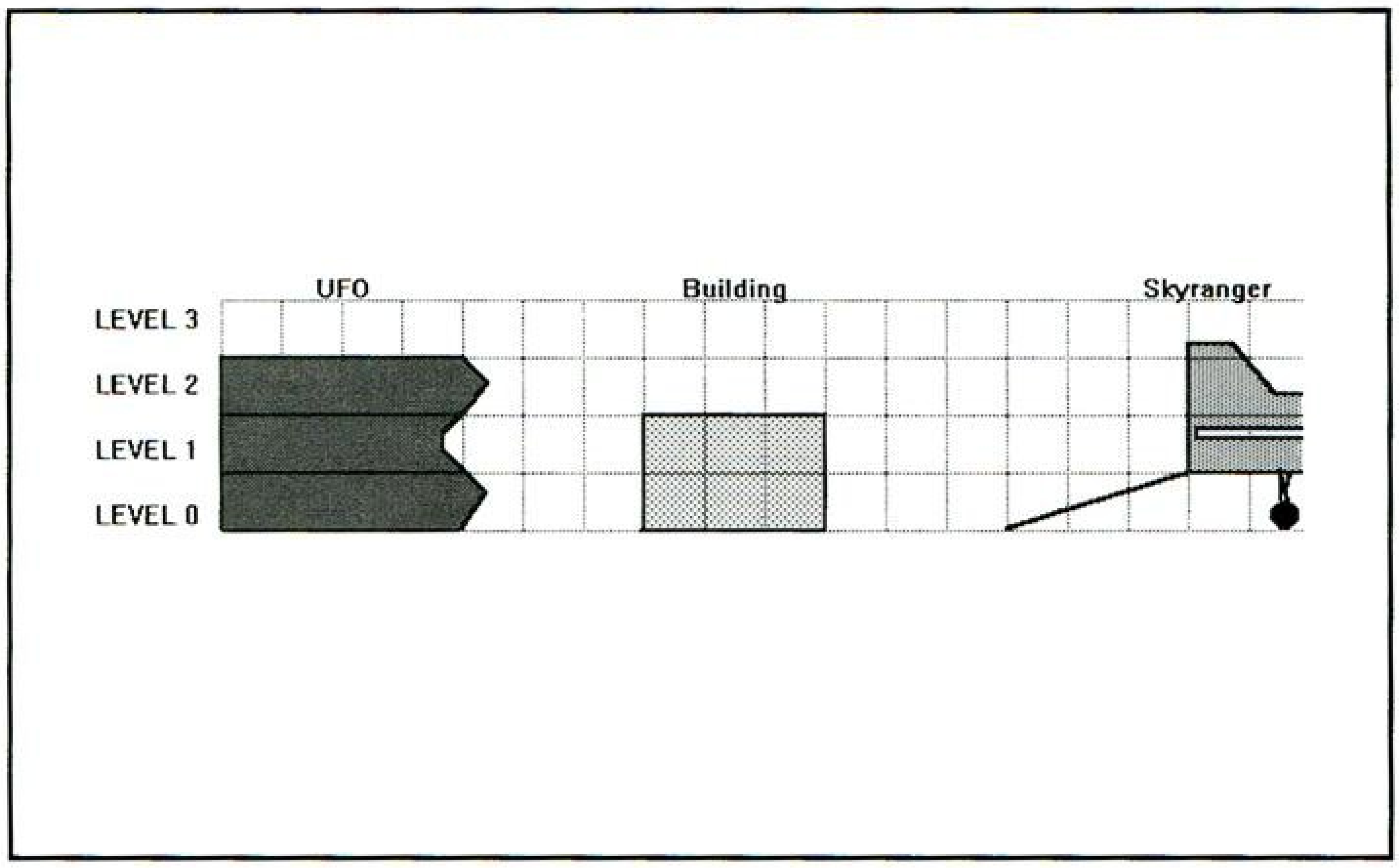

UFO
Building
Skyranger
LEVEL 3
LEVEL 2
LEVEL 1
LEVEL 0

Figure 8-6
Side view of an outdoor Battlescape.

Item Boxes

These boxes, on the right and left ends of the control bar, show what the chosen soldier is carrying in his hands. A picture of the item that is being carried appears in the box. If the item is a ranged weapon, a number shows how many shots remain in the weapon. When the active unit is an HWP, a picture of the HWP appears in one of the boxes along with the number of available shots remaining in the vehicle.

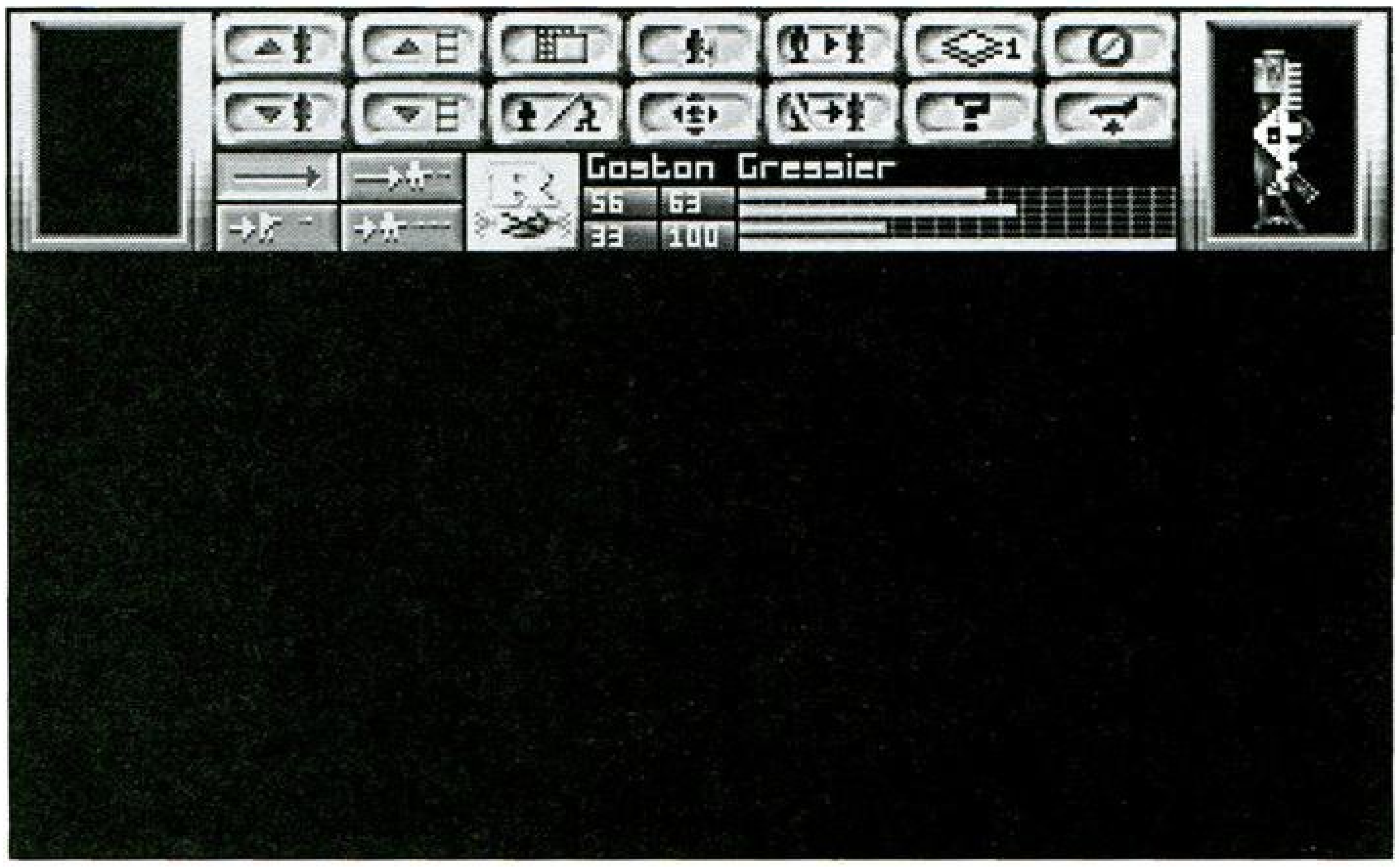

1
Gaston Gressier
56
63
33
100

Figure 8-7
The Battlescape control bar.

To use an item or to fire the HWP's weapon, click on the box containing the item or weapon.

Ascend/Descend

These controls move the selected unit up or down between levels on the Battlescape. You can use them only when the unit is on an elevator or when it is capable of flight, as with hovertanks and soldiers in flying suits.

View Next Level

These controls enable you to scroll up and down through all levels of the Battlescape, allowing you to view units and structures on each plane that are visible to your soldiers.

Map

Clicking this button replaces the 3-D Battlescape view with an overhead map of the mission area (see Figure 8-8).

The map displays one section of the mission area. Clicking on the map recenters the map on the clicked position. Only one plane of the Battlescape is displayed on the map. You can change planes by clicking the up and down arrows on the left side of the display. The number of the level being viewed appears on right side of the display.

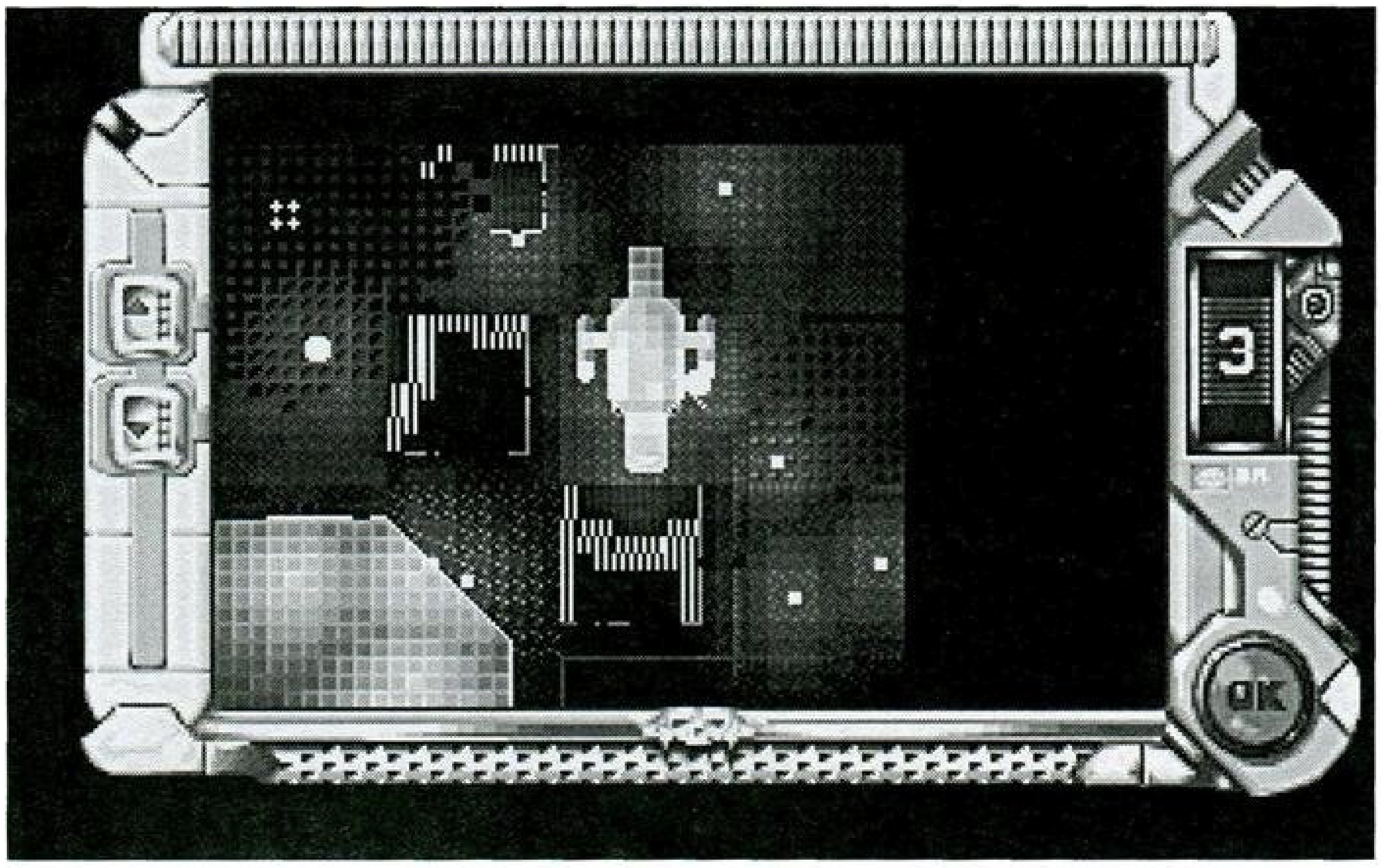


Figure 8-8
The Map Screen view.

This list shows the symbols on the map:

- **Yellow dots:** X-COM units
- **Blue dots:** Aliens
- **White Xs:** Corpses or destroyed units

To exit from the map screen, click the right mouse button.

Stand/Kneel

Order the active unit to assume a kneeling position (if the soldier is standing) or to assume a standing position (if the soldier is kneeling). This button has no effect if the selected unit is an HWP.

Equip Soldier

This button opens the Equip Soldier screen for the active soldier. If the active unit is an HWP, this control has no effect.

This screen is almost identical to the Equip Soldier screen displayed at the beginning of the ground assault, with some exceptions. First, rather than arrows to scroll through all your soldiers, the upper right section of the screen shows the number of time units (TUs) the soldier has left in the current turn.

The other difference is that the area at the bottom of the screen represents not what is stored in the transport craft but what is lying on the ground at the soldier's feet. If the soldier has a sufficient amount of TUs remaining and room to carry it, she may pick up these items. Items may also be dropped on the ground.

You must go to this screen to move items from the place where they are carried (backpack, belt, etc.) into the soldier's hands. Only items in the soldier's hands can be utilized on the Battlescape.

To exit from this screen, click the OK button.

Center Display on Soldier

If you have scrolled the view away from the active unit, clicking this button recenters the Battlescape view on the active soldier or HWP.

Select Next Soldier

This control centers the Battlescape view on the next member of your squad, or HWP. Please note that if you have been randomly clicking through your units, this control jumps between the units in a somewhat random manner.

Select Next Soldier–Deselect Current Soldier

This control works in the same manner as Select Next Soldier, except that the current soldier is removed from the rotation when this button is clicked. Using this button, you scroll to each member of the squad and HWP only one time apiece per turn, whereas using the Select Next Soldier control continues to rotate through the entire squadron as long as you keep clicking.

Split Level View

This option switches between two alternating views of the Battlescape:

Multi-level View: Shows everything from the selected level and all levels below (the view defaults to this option)

Full View: Displays all levels of the Battlescape simultaneously, regardless of the selected level; this view is much less effective because it hides all units (alien and X-COM) that are behind or inside buildings and craft

Options

Pressing this button brings up the Battlescape Options screen, shown in Figure 8-9.

From this screen, you can set certain functions of the Battlescape to suit your preferences and the processor speed of your computer. These options are as follows:

Scroll Speed: Controls the speed at which the Battlescape view moves when you are scrolling it. This option can be set from 1 (slowest) to 5 (fastest). If you have a slow computer, set the scroll speed to fastest. If you have a fast computer, select either 2 or 3.

Fire Speed: Controls how fast your soldiers' shots and those of the aliens move on the screen, with settings from 1 (slowest) to 6 (fastest). Except on very slow computers, settings higher than 4 make the shots move so fast that it is difficult to tell where

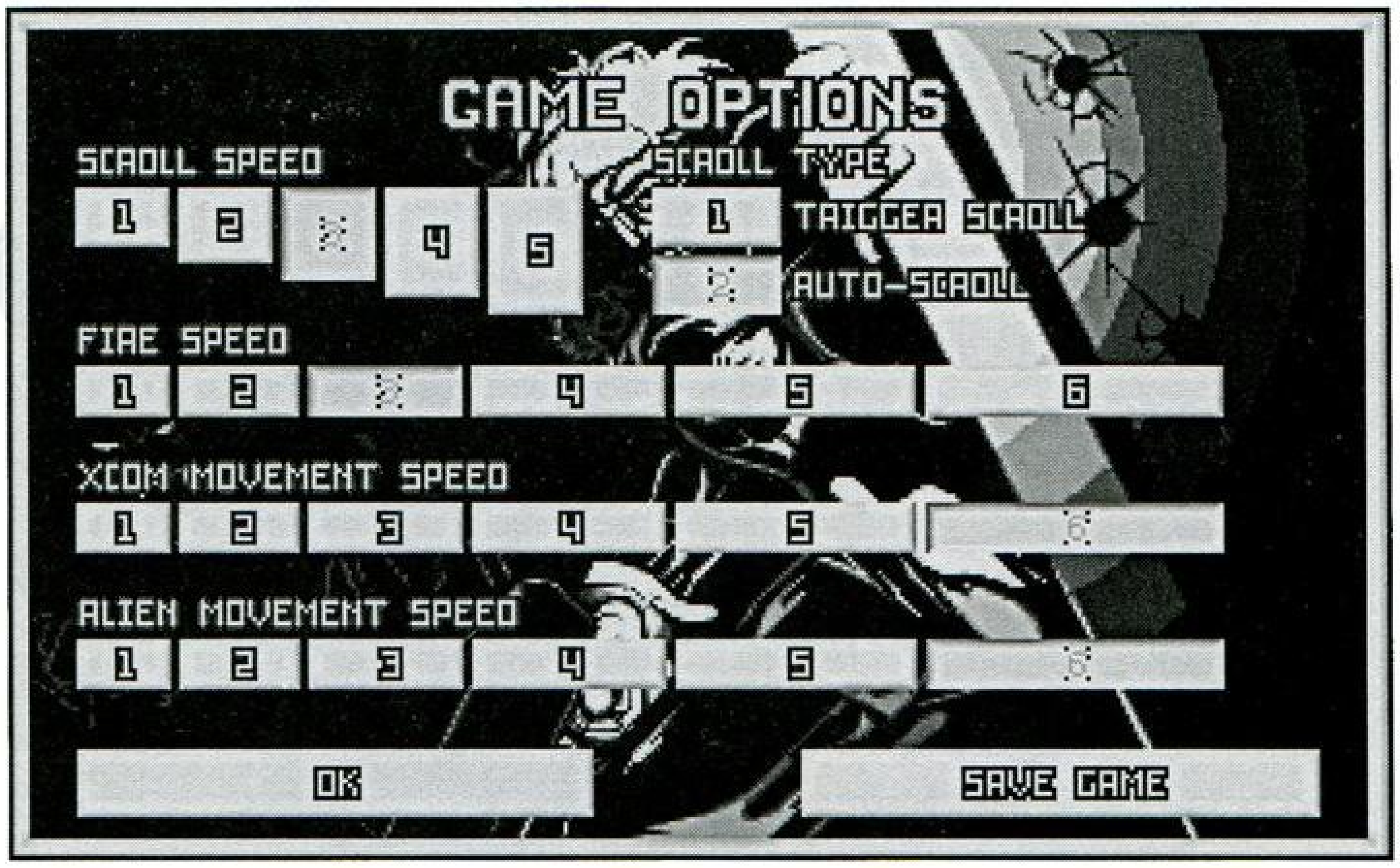

GAME OPTIONS
SCROLL SPEED
1
2
4
5
SCROLL TYPE
1
TRIGGER SCROLL
AUTO-SCROLL
FIRE SPEED
1
2
4
5
6
XCOM MOVEMENT SPEED
1
2
3
4
5
ALIEN MOVEMENT SPEED
1
2
3
4
5
OK
SAVE GAME

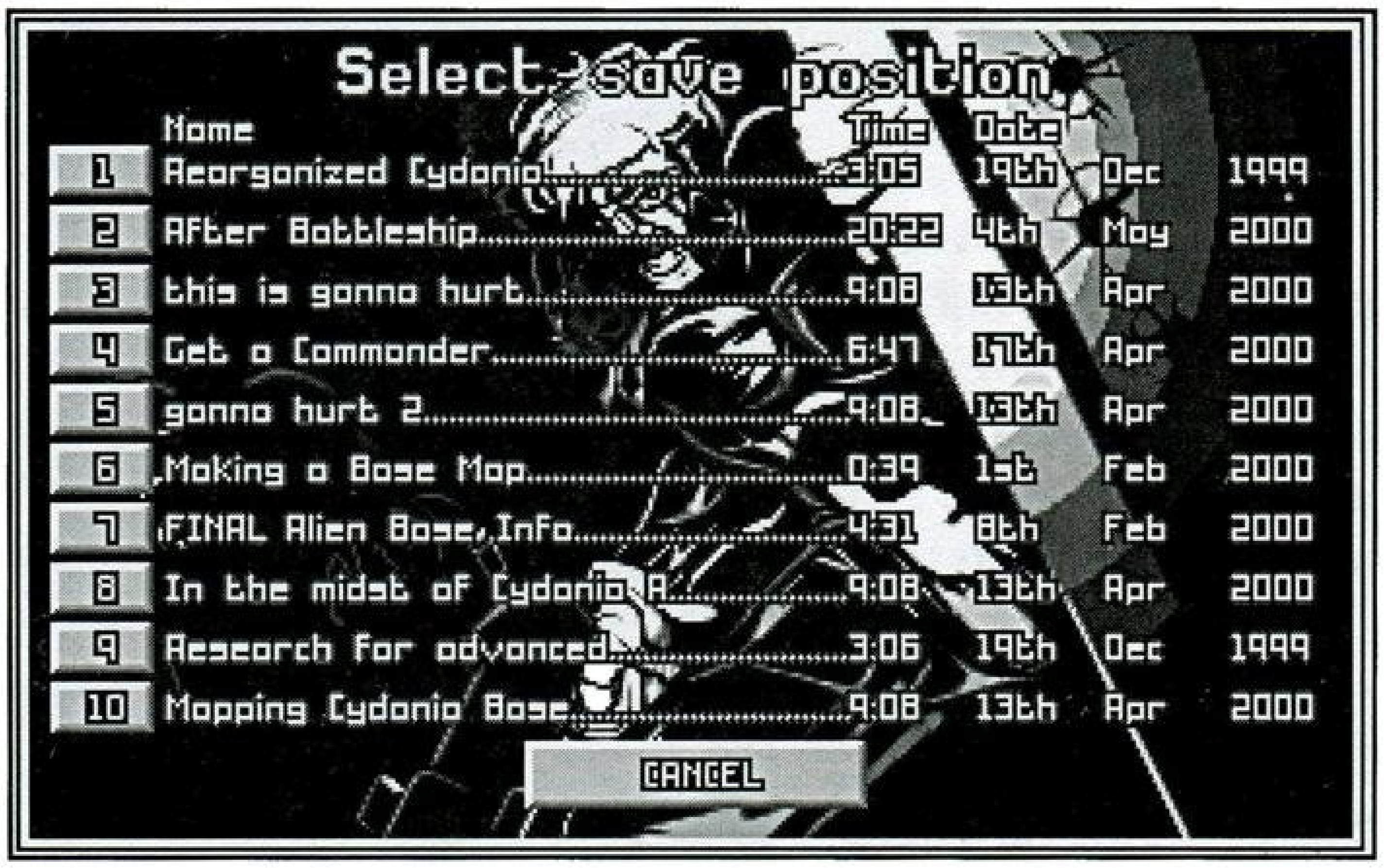
Figure 8-9
The Battlescape Options screen.

they are coming from. Because alien weapons fire is often the first clue to a hidden alien's location, it is a good idea to keep the Fire Speed in the slow-to-medium range.

X-COM Movement Speed: Controls the speed at which your soldiers and HWPs move on the Battlescape, with settings from 1 (slowest) to 6 (fastest). No real consequence is involved in allowing your soldiers to move as fast as possible, because they automatically stop when they see an alien. So unless you find high-speed movement disconcerting, the fastest setting is best for keeping the pace of the battle moving briskly.

Alien Movement Speed: Controls the speed at which the aliens move, with settings from 1 (slowest) to 6 (fastest). Unlike the setting for X-COM movement speed, it is best to keep alien movement speed in the slow-to-medium range. Sometimes an alien may move into and then out of your sight during its movement. When the speed is set to the highest level, it is nearly impossible to see in which direction the alien goes when it steps out of your field of view.

Save Game: Allows you to save the game at any time during your turn in a battle. When you click this option, the Select Save Position screen appears, as shown in Figure 8-10.



Select save position

	Name	Time	Date		
1	Reorganized Cydonia	3:05	19th	Dec	1999
2	After Battleship	20:22	4th	May	2000
3	this is gonna hurt	9:08	13th	Apr	2000
4	Get a Commander	6:47	17th	Apr	2000
5	gonna hurt 2	9:08	13th	Apr	2000
6	Making a Base Map	0:39	1st	Feb	2000
7	FINAL Alien Base,Info	4:31	8th	Feb	2000
8	In the midst of Cydonia A	9:08	13th	Apr	2000
9	Research for advanced	3:06	19th	Dec	1999
10	Mapping Cydonia Base	9:08	13th	Apr	2000

Figure 8-10
The Select Save Position screen.

To save the game, click on one of the numbered positions and enter a name for the game. The current game date and time are added automatically to the right of the name you enter. Press Enter to save the game. **Note:** After you click on a save position, the game formerly saved in that position is erased! There is no way to reverse this, so don't make a mistake!

To exit from the Options screen, click the OK button.

End Turn

After your soldiers have completed all movement and weapons fire, end the turn by clicking this button.

Dust Off

This control immediately aborts a ground assault mission and orders the transport craft to take off.

Reserve Time Units

These four buttons are grouped together, below the rest of the control-bar options. These buttons enable you to reserve time units during movement so that you have enough TUs left after movement to fire a weapon.

The green arrow in the top left corner of these buttons allows the chosen unit to move freely across the Battlescape until all TUs have been used up. At the beginning of each turn, this option is chosen by default.

This button, to the right of the green arrow button, reserves enough TUs for the selected unit to fire a snap shot at the end of its movement.

This button, below the green arrow, reserves enough TUs for the selected unit to fire an aimed shot at the end of its movement.

This button, in the lower right corner of these controls, reserves enough TUs for the selected unit to fire an auto-shot at the end of its movement.

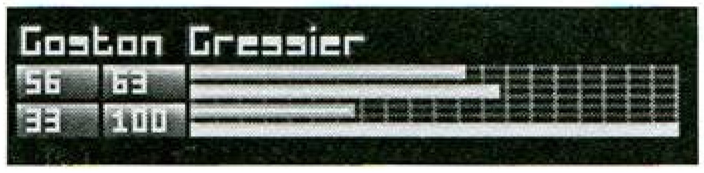
At the beginning of every turn, the Reserve Time Units option defaults to the green arrow—unlimited movement. After you click a new option, this option remains active, regardless of which unit is chosen, until you change it, until the end of the turn, or until an active unit is killed, destroyed, or rendered unconscious. In any of these situations, the Reserve Time Units option reverts back to unlimited movement.

You can find more information about the Reserve Time Units option later in this chapter, in the section entitled "How to Move".

Rank

To the right of the Reserve Time Units controls is a yellow icon denoting the rank of the active unit. The insignia for various ranks in the game are illustrated earlier in this chapter. If the active unit is an HWP, this space is left blank.

Soldier Data



The final section of the Battlescape control bar consists of data on the active unit. The top section shows the name of the active soldier. If the active unit is an HWP, the type of HWP is displayed here.

Below the name box are four colored boxes that contain numbers, and a small graph with corresponding colored lines. These lines represent the four statistics of the active unit that most affect its performance in battle:

Green: Remaining time units in the current turn

Orange: Current energy level

Red: Current health level

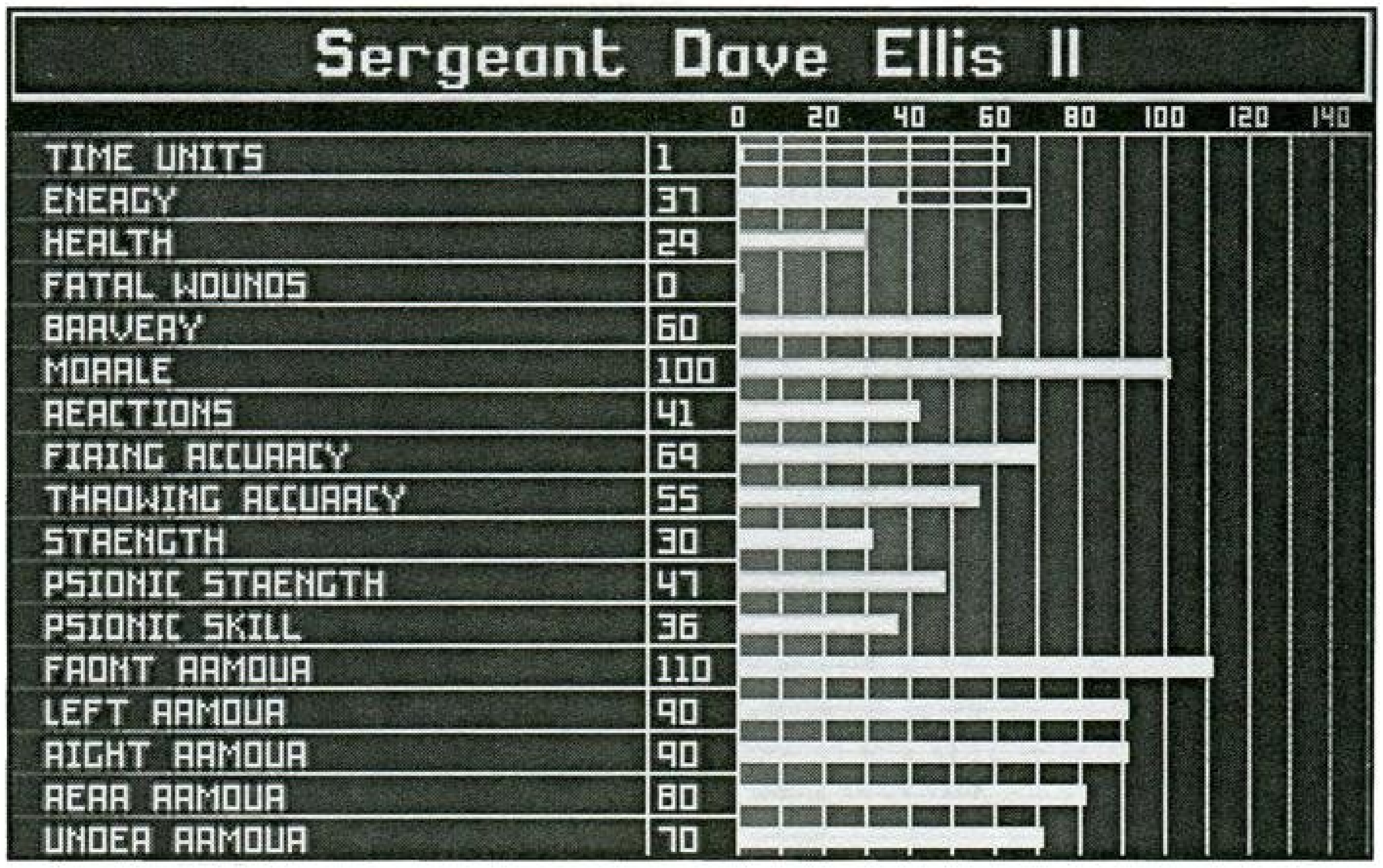
Purple: Current morale level

In addition to these statistics, you can get a full list of the active unit's statistics by clicking anywhere within the Soldier Data area. This step brings up the Soldier Data screen, as shown in Figure 8-11.

This screen is similar to the Soldier Statistics screen, shown in Figure 8-1, but it shows several more statistics that relate to the unit's battle performance:

Energy: The amount of physical energy the soldier has remaining. This amount decreases as the soldier performs strenuous tasks. This statistic is the same as Stamina on the Soldier Statistics screen.

Fatal Wounds: Indicates whether a soldier has received a fatal wound. As you might expect, fatal wounds cause a soldier to lose health steadily each turn and eventually result in the soldier's



Sergeant Dave Ellis II

TIME UNITS	1
ENERGY	37
HEALTH	29
FATAL WOUNDS	0
BRAVERY	60
MORALE	100
REACTIONS	41
FIRING ACCURACY	69
THROWING ACCURACY	55
STRENGTH	30
PSIONIC STRENGTH	47
PSIONIC SKILL	36
FRONT ARMOUR	110
LEFT ARMOUR	90
RIGHT ARMOUR	90
REAR ARMOUR	80
UNDER ARMOUR	70

Figure 8-11
The Soldier Data screen.

death if it's not treated. During battle, wounds may be healed by using a medi-kit. If the battle ends while a living soldier is suffering from a fatal wound, the soldier is added to the wounded list and is treated at his home base.

Morale: Indicates the level of the soldier's morale. Morale level begins to drop if X-COM forces are losing a battle. As stated, a decrease in morale is more pronounced when a higher-ranking officer dies than when a lower-ranking soldier dies. Whenever morale drops below 50 percent, the soldier may panic or go berserk. Soldiers with higher bravery levels lose morale less quickly.

Armor Status: Remaining strength of the soldier's armor. Listed at the bottom of the screen, this statistic is divided into five separate numbers, indicating armor in various sections of the body (Front, Left, Right, Rear, and Under).

TIME ON THE BATTLESCAPE

Whereas the game works in "real-time" on the Geoscape screen, with the game counting off days, hours, minutes, etc., time on the Battlescape screen is turn-based. This means that you have the opportunity to move all your X-COM units and, when you finish, the aliens have their chance to move. Turns alternate back and forth until the end of the battle. X-COM forces always have the first move in a battle.

LINE OF SIGHT

When your transport craft first arrives at the site of a ground assault, most of the Battlescape is black. The reason is that you can see only objects and terrain within your units' line of sight. As the soldiers and HWPs are deployed, more of the Battlescape becomes visible.

After your units have revealed a section of the Battlescape, it remains visible even when it is no longer within a unit's line of sight. However, movement of aliens in unobserved sections of the Battlescape is still not visible.

HOW TO MOVE

The Battlescape is divided into squares, each of which represents one space of movement. Every Battlescape is a grid measuring 50 squares from left to right, and 55 squares from top to bottom. They also have from two to four vertical levels, numbered zero through three, with zero as ground level. Except in alien and X-COM bases and inside UFOs, the squares are not visible, but all movement takes place based on this grid system. No units may move beyond the borders of the grid.

To move a soldier or an HWP on the Battlescape, choose the unit you want to move by clicking it or by using the Select Next Soldier button on the Battlescape control bar. When the unit is selected, a flashing arrow appears above it (see Figure 8-12), and the unit's name, rank, and statistics appear in the Soldier Data box.

When a unit is active, the cursor changes from an arrow to a red box. In the case of HWPs, the cursor changes to four connected red boxes. To move the unit, place the cursor on the map square you want to move to and then click the left button. If nothing is blocking its way and the unit has enough TUs to get there, it moves to the chosen destination.

A unit stops moving when one of the following happens:

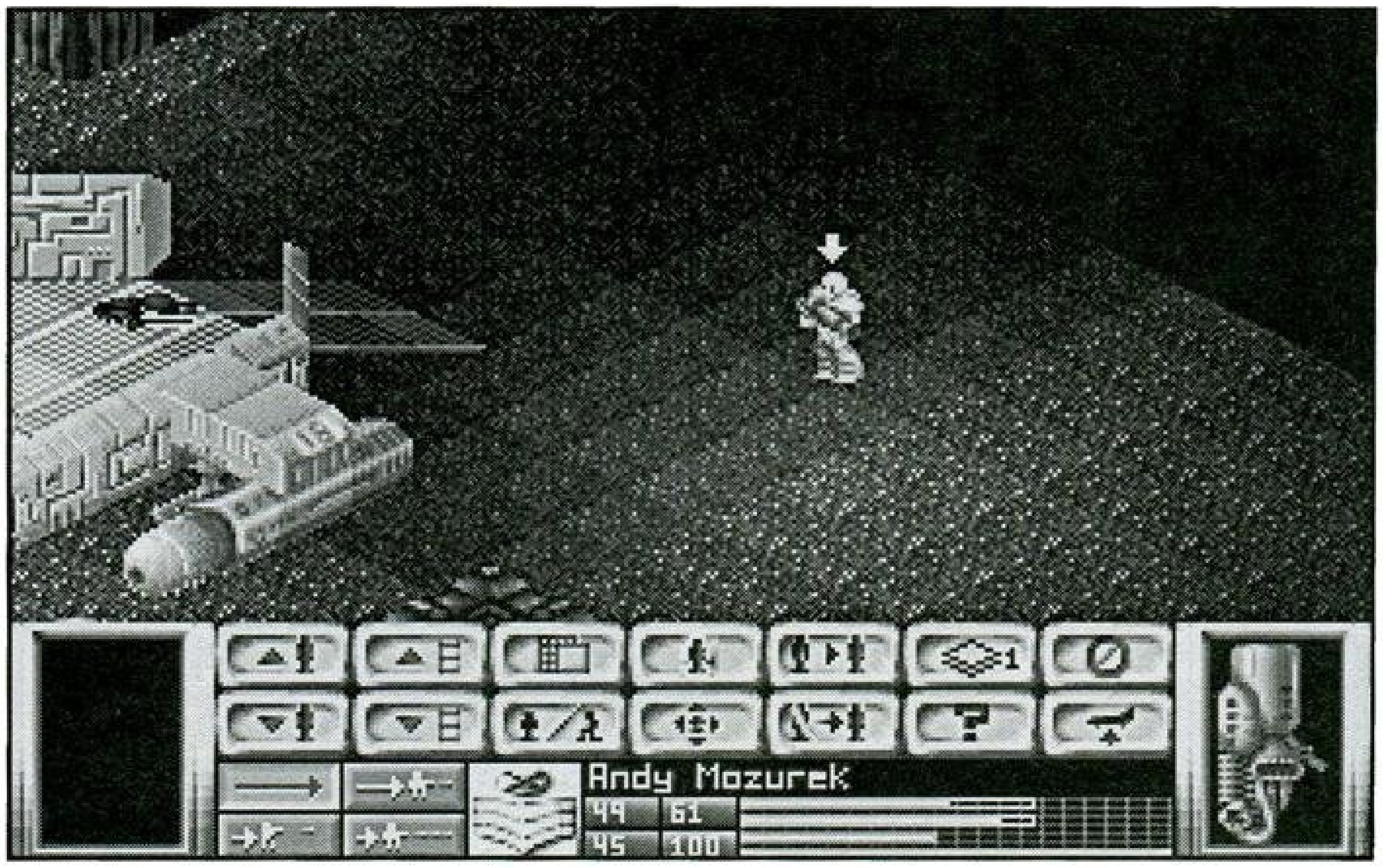

Andy Mozurek
49 61
45 100

Figure 8-12
An active soldier
on the Battlescape.

- It reaches the selected destination.
- It has no more time units.
- It reaches the number of time units reserved for weapons fire.
- An alien is spotted.

TIME UNITS, ENCUMBRANCE, AND TERRAIN

As you saw earlier, each soldier has a certain number of time units (TUs) to use each turn. This is true for X-COM HWPs and alien forces too. Every action — turning around, walking, crouching, loading weapons, picking up objects — requires a certain number of TUs to complete. After all TUs have been used, the soldier, HWP, or alien cannot perform any more actions until the next turn.

The number of TUs required to perform each task is listed in Table 8-3.

As you can see in this table, the number of TUs required for movement is affected by the type of terrain. Moving uphill or through thick vegetation require more TUs than does walking on flat, clear ground. Continued travel through this type of terrain results in a loss of energy (or stamina) as well. The terrain displayed on the Battlescape varies depending on the type of ground assault mission and the area of the world in which the ground assault takes place.

Another factor that greatly affects movement is encumbrance. Although many spaces are available for carrying objects, each soldier has a physical limit to the amount of weight she can carry and still move effectively. Each soldier may carry with no penalty any number of items whose weight adds up to her strength or less. For every point of weight above the soldier's strength, the soldier's number of TUs per turn is progressively less.

Table 8-4 lists all equipment, weapons, and other items that may be carried by soldiers, along with the weight of each one.

RESERVING TIME UNITS

As you read in the explanation of the Battlescape control bar, you can reserve TUs for the purposes of firing a weapon at the end of

Table 8-3 Time-Unit (TU) Cost of Movement and Actions

Movement Type or Action	TUs
Move one space (normal terrain)	4
Move one space (medium grass)	5
Move one space (tall grass)	6
Turn one facing (45 degrees)	1
Crouch	4
Stand up from crouch	6
Climb or descend one space (hill/ramp/stairs)	8
Open or close door	12
Rise or descend (flight suit/hover HWPs)	8
Load weapon	15
Drop object (from hand)*	2
Pick up object (in hand)*	8
Transfer object from hand to backpack	14
Transfer object from backpack to hand	8
Transfer object from hand to belt	8
Transfer object from belt to hand	4
Transfer object from hand to shoulder	10
Transfer object from shoulder to hand	3
Transfer object from hand to leg	8
Transfer object from leg to hand	4
Transfer object from backpack to belt	12
Transfer object from belt to backpack	16
Transfer object between belt and leg	10
Transfer object from belt to shoulder	12
Transfer object from shoulder to belt	10
Throw item **	25 %

* Picking up an object and placing it anywhere other than in your hand uses a number of Tus equivalent to picking up the object and transferring the object to the new location. The same is true when you drop an object; dropping an object from your backpack uses eight TUs to transfer the object to your hand, and two Tus to drop it to the ground.

** Throwing an item costs 25 percent of the soldier's base number of TUs.

Table 8-4 Weight of Carried Items (for Calculating Soldier Encumbrance)

Object	Weight
Pistol	5
Pistol clip	3
Rifle	8
Rifle clip	3
Heavy cannon	18
Heavy cannon AP ammo	6
Heavy cannon HE ammo	6
Heavy cannon I ammo	6
Auto-cannon	19
Auto-cannon AP ammo	5
Auto-cannon HE ammo	5
Auto-cannon I ammo	5
Rocket launcher	10
Small rocket	6
Large rocket	8
Incendiary rocket	8
Laser pistol	7
Laser rifle	8
Heavy laser	18
Grenade	3
Smoke grenade	3
Proximity grenade	3
High-explosive	6
Motion scanner	3
Medi-kit	5
Psi-amp	8
Stun rod	6
Electro-flare	3
Heavy plasma	8

(Cont. on page 208)

(Cont. from page 207)

Table 8-4 Weight of Carried Items (for Calculating Soldier Encumbrance)

Object	Weight
Heavy plasma clip	3
Plasma rifle	5
Plasma rifle clip	3
Plasma pistol	3
Plasma pistol clip	3
Blaster launcher	16
Blaster bomb	3
Small launcher	10
Stun bomb	3
Alien grenade	3
Mind probe	5
Dead or unconscious Sectoid	30
Dead or unconscious Snakeman	40
Dead or unconscious Ethereal	25
Dead or unconscious Muton	40
Dead or unconscious Floater	20
Dead or unconscious Celatid	35
Dead or unconscious Silacoid	40
Dead or unconscious Chryssalid	40
Dead or unconscious soldier	22
Dead or unconscious soldier in personal armor	24
Dead or unconscious soldier in power suit or flying suit	26

your movement. This strategy is almost always a good idea. Because you cannot see any aliens that are not in a unit's line of sight, it is possible to send a soldier running across the Battlescape and use up all his TUs only to stop in the middle of an open field that is facing the enemy. If you reserve time for a snap shot, your soldier or HWP at least has the chance to fire one shot at any alien who might be hiding along the way.

When you reserve TUs to fire a weapon, the exact number of TUs required for the chosen type of shot is set aside for use at the end of a unit's movement. When a soldier has more than one weapon in hand, the game calculates the reserved time based on the weapon that requires the least amount of TUs to fire.

The unit may perform actions in addition to movement, including firing weapons. When the number of TUs remaining is equal to the number that is reserved, a message appears in the Soldier Data box telling you that TUs have been reserved for the chosen type of shot. At this point, the only action the unit can take is to fire the type of shot that is reserved. If you change your mind about reserving TUs for a unit and want to use the remaining TUs for other actions, click the green arrow to allow free movement for the unit.

You should keep a couple of hazards in mind when you reserve TUs for weapons fire. First, the Reserve Time Units option always defaults to "free movement" at the beginning of each turn. When you click on one of the reserve options, that option remains active throughout the rest of the current turn, for every unit unless an active unit is killed or destroyed or becomes unconscious. When this happens, the Reserve Time Units option returns to the "free movement" default. Make sure that you reset the option you want if a unit dies while active. Otherwise, you may run into an unpleasant surprise when you want to fire at an alien at the end of a unit's movement and you find that the unit has no more TUs.

Second, be sure that the reserve option you choose applies to the weapon used by the active unit. Suppose that all your soldiers are carrying laser rifles. At the beginning of your turn, you set the Reserve Time Units option to Reserve Time for Auto-Shot. This setting works fine for all your soldiers; at the end of their movement, they have enough TUs remaining to fire an auto-shot. In addition to your soldiers, you also have a tank/rocket launcher on this mission. When the tank becomes the active unit, the Reserve Time for Auto-Shot option is still chosen. Unfortunately, the tank/rocket launcher is equipped with a weapon incapable of firing auto-shots; it can fire only snap shots and aimed shots. If the auto-shot reserve option remains active, the tank ignores the reserve order and moves as though "free movement" had been chosen. It is important that you keep track of which weapon is being used by the active unit and choose a reserve option that allows for the type of shot fired by that unit's weapon.

Finally, there are two weapons for which the Reserve Time Units options do not function: the blaster launcher and the hovertank/launcher. When you use these weapons, any reserve options chosen are ignored, and the units move as though "free movement" were chosen.

DEPLOYMENT WITH HWPS

Because X-COM ground assault squads consist of relatively few soldiers, no allowance is made for group deployment in the game. Instead, each member of the squad must be moved independently.

At the beginning of most ground assaults, your squad begins inside the transport craft. Any HWPs are placed closest to the exit ramp, with soldiers behind them, as shown in Figure 8-13.

On the first turn, select the Reserve Time Units for Snap-Shot option, and choose the unit closest to the exit ramp as your active unit. This first move is one of your most vulnerable moments in a

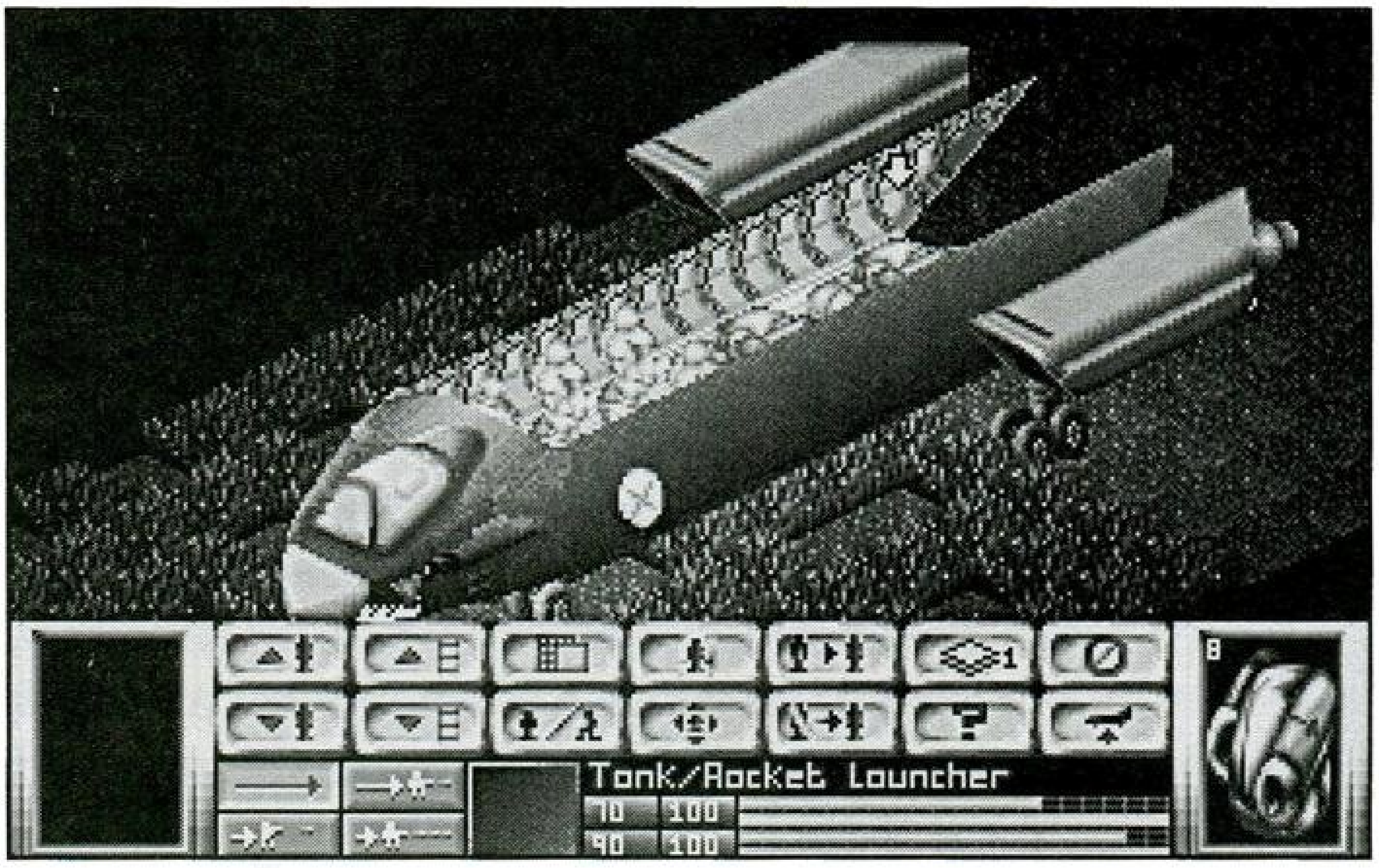


Figure 8-13.
A ground assault squad inside a Skyranger.

ground assault because very little of the battle site is visible to your units. Often, aliens are hiding just to the right or left of the exit ramp, and they immediately open fire on the first unit to exit from the transport craft. For this reason, you should take at least one HWP with you on every ground assault. HWPs are always positioned so that they can exit from the craft first. If a hidden alien opens fire, it is much less likely for an HWP to be destroyed than it is for a soldier to be killed in the same situation.

After sending out the first unit, your first priority is to get as much of the Battlescape as possible into view quickly. This strategy gives you an idea of where your transport has landed in relation to the borders of the map. Also, it gives you an idea of what type of terrain you are dealing with on that mission.

If you have more than one HWP, send the first one out and turn it to face away from the transport craft to the right, beside the exit ramp. Send out the second HWP and put it on the opposite side of the craft, facing in the opposite direction. If no enemies are revealed, turn one of the HWPs to face the front end of the transport craft. You should now have a good view of the area surrounding your ship, as illustrated in Figure 8-14.

If you have only one HWP, send it out and have it turn 360 degrees at the bottom of the ramp. This technique reveals nearly as

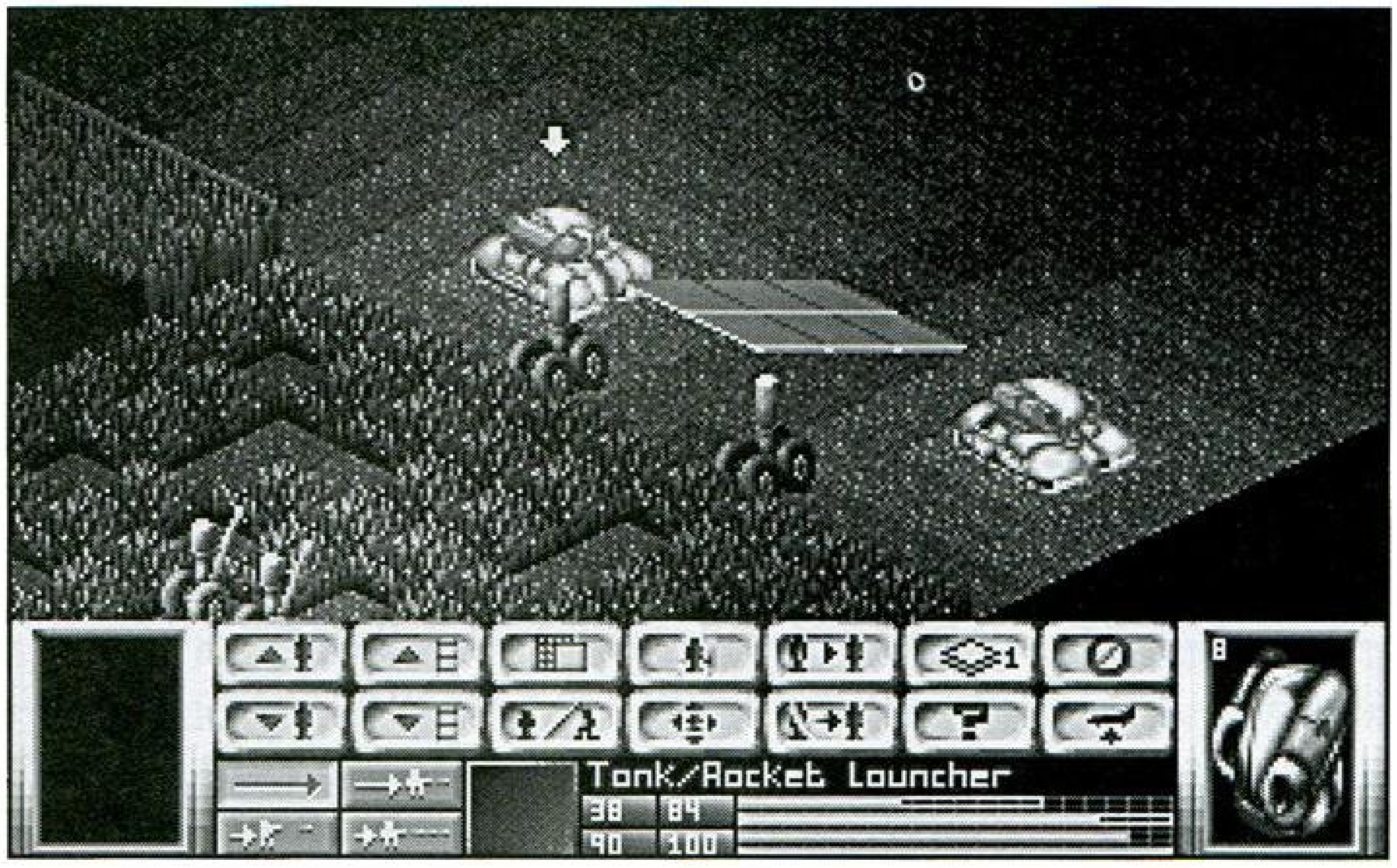


Figure 8-14
Deploying HWPs to reveal the area surrounding the Skyranger.

much terrain as sending out two HWPs, but it has the disadvantage of having only one HWP available to fire if any aliens are spotted.

When you know that the immediate area is safe, you can begin to deploy soldiers. It is a good idea to keep your soldiers separated from one another. Move them out one at a time, reserving time for a snap shot just in case an alien is spotted. Don't deploy all your soldiers at one time; if you do, you end up with at least one clump of soldiers all standing in one place. When aliens spot this sort of troop deployment, they are far more likely to use grenades and other explosives to attack the group. Deploy no more than three or four soldiers on the first turn. As long as the area around the base of the exit ramp is clear, the soldiers left in the transport are relatively safe for the time being. When the soldiers have finished their movement, they should be deployed in different areas and separated by at least four or five squares. When you have completed movement, end the turn.

On subsequent turns, continue with a similar strategy. Allow an HWP to lead the way into unexplored areas, followed by one or two soldiers separated from one another by a disceet distance. As the initial units move away from the transport, additional soldiers may be deployed from the craft.

There are two schools of thought on deployment of remaining troops on the transport. One is that you should deploy only a few soldiers and keep the rest inside the transport craft as backups. Unfortunately, the success of this plan depends largely on luck. It works pretty well in the lower levels of difficulty, when the aliens are less aggressive, but even then it is possible to lose most or all of the soldiers left in the transport in a single turn if an alien sneaks up on the craft and throws a grenade inside or if one of the soldiers inside the craft falls under alien control and begins shooting everyone in sight.

A safer plan is to deploy all soldiers and leave only one or two in the transport. If you want to keep some of them as reserves, deploy them apart from each other near the transport. Give them all orders to kneel behind an object that provides good cover. (The landing struts of the transport are particularly good for this process.) If one of your soldiers is carrying a blaster launcher, keep that soldier as one of the reserves near the ship because the blaster launcher is a guided-missile weapon best fired from long range.

DEPLOYMENT WITHOUT HWPS

If you don't have any HWPs on your ground assault team, a slightly different strategy is called for. To explore the area immediately surrounding the craft, send out the least valuable soldiers (those with the lowest statistics) first to draw any close alien fire. Arm these soldiers with the heaviest weapons they can carry. Deploy two soldiers at the bottom of the exit ramp in the same way as described for deploying HWPs.

When you deploy the rest of your soldiers, continue to allow the least valuable members of the group to lead the way into unexplored areas, with one or two good soldiers following at a discreet distance. Deploy your reserve troops as described in the preceding section.

With soldiers rather than HWPs leading the assault teams, your scout is much more likely to be killed when aliens are encountered. If you use caution and reserve TUs for shots every move, however, your soldiers still have an excellent chance for survival.

COMBAT

Combat in X-COM consists of firing ranged weapons or throwing explosive weapons or using mind attacks through the use of psionics. With the exception of certain aliens and combat using the stun rod, there is no hand-to-hand combat in the game.

X-COM soldiers may fight using any weapon that their scientists have researched in the game. When alien weapons that have not yet been researched are picked up by a soldier during a battle, they are referred to as alien artifacts and cannot be used.

To be able to use a weapon, the weapon must be loaded and carried in the soldier's hand.

LOADING AND UNLOADING WEAPONS

Most weapons in the game require ammunition of some sort. The only exceptions are laser weapons, which operate by using a self-contained power source. At the beginning of a ground assault

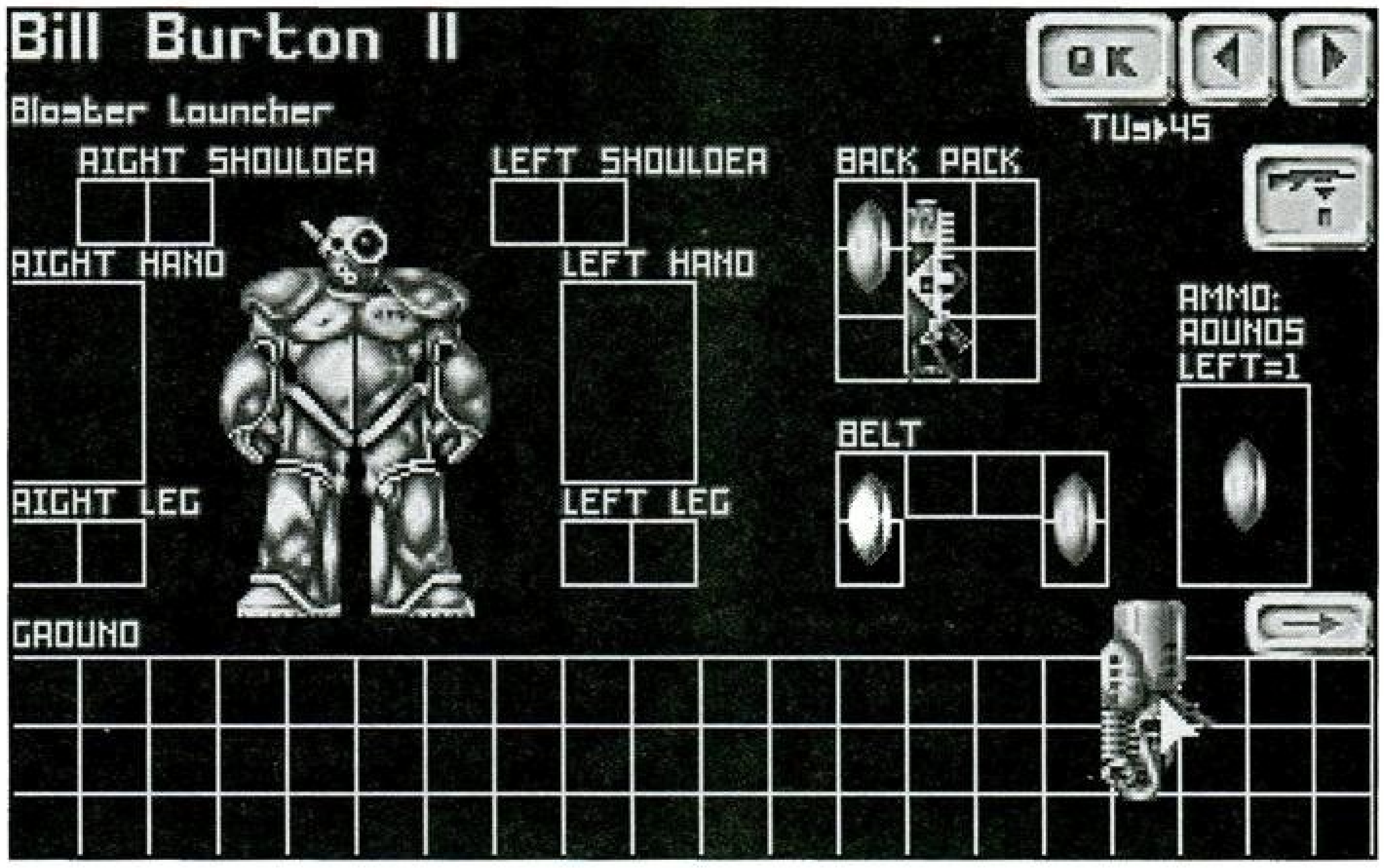

Bill Burton II
Blaster Launcher
RIGHT SHOULDER
LEFT SHOULDER
BACK PACK
OK
TU>45
RIGHT HAND
LEFT HAND
AMMO:
ROUNDS
LEFT=1
BELT
RIGHT LEG
LEFT LEG
GROUND

Figure 8-15 Checking to see whether a weapon is loaded.

mission, all weapons are already loaded if ammunition is available. On arrival at the site of the mission, you have the opportunity to scroll through the Equip Soldier screens of the soldiers in your squad. To make sure that a weapon is loaded, click on the weapon. When you do, the name of the weapon is displayed, and a box appears showing the amount of ammunition in the weapon (as shown in Figure 8-15).

To load a weapon, place the weapon in the soldier's hand. Click on the appropriate ammunition and drag it onto the weapon. A click is heard, and the weapon is then loaded.

In some instances, it may become necessary to unload a weapon. For example, you may have only one or two shots left in a clip and want to put in a fresh clip before moving; or you may want to change ammunition types when you're using a weapon, such as the heavy cannon, that can use three different types.

To unload a weapon, you must leave both of the soldier's hands empty. Drag the weapon to the Unload button on the Equip Soldier screen and click. The weapon appears in one of the soldier's hands, and the ammunition appears in the other. The weapon then can be reloaded normally.

LEFTOVER AMMUNITION

After a ground assault is over, some (if not all) of the soldiers may have unused ammunition remaining in their weapons. When the battle ends, all the weapons are automatically returned to the base and reloaded if ammunition is available. All unused ammunition left in a weapon is lost at this point, even if the clip in the weapon has expended only one round. If you have noticed an ammunition shortage after a while, now you probably know why.

FINDING YOUR TARGET

Although your soldier's target may often be obvious, aliens are often well-hidden in darkness or shadows. When a moving soldier spots an alien, the soldier's movement automatically pauses, and a small yellow number in a flashing, red square appears in the lower right corner of the Battlescape. If the alien is not visible to you on the screen, click the flashing square. This step automatically centers the Battlescape view on the alien.

Also, when the movement or firing cursor passes over a target, it begins flashing yellow to indicate that a target is present.

THE MOTION SCANNER

One of the first items available to research is the motion scanner. This device uses a variety of detection methods to locate any moving units within a certain radius of the soldier using it. This device allows you to keep your soldiers safe by not having to send them out to personally scout for aliens.

To use the motion scanner, it must be in the soldier's hand. When you click on the scanner's icon on the Battlescape control bar, a menu appears, as shown in Figure 8-16. Click on Use Scanner to activate the device.

When the scanner is activated, a tracking screen appears, as shown in Figure 8-17.

The arrow at the center of the screen shows the position of the soldier using the scanner and the direction in which the soldier is facing. On the screen, the large blips represent large, moving

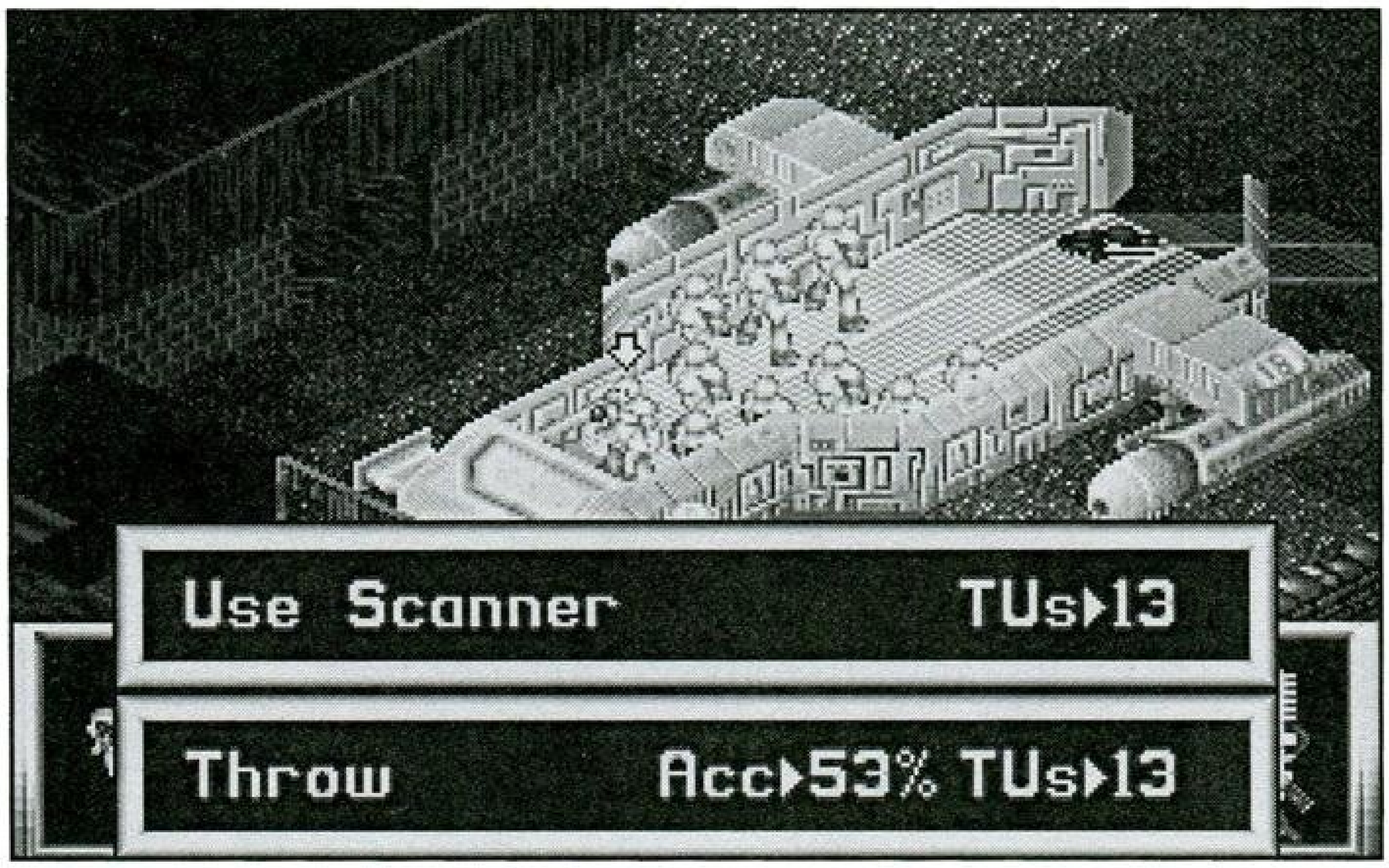


Figure 8-16
The Motion Scanner options menu.

objects (such as tanks and cyberdiscs), and the small blips represent smaller moving objects (soldiers, civilians, man-size aliens, etc.). Based on the direction the soldier is facing and the circular range scale on the screen, you can get a fairly good approximation of where all moving creatures within range are located.

There are two unfortunate drawbacks to the motion scanner. First, it can detect only moving units; aliens standing still are not detected. Second, the scanner picks up movement by civilians and

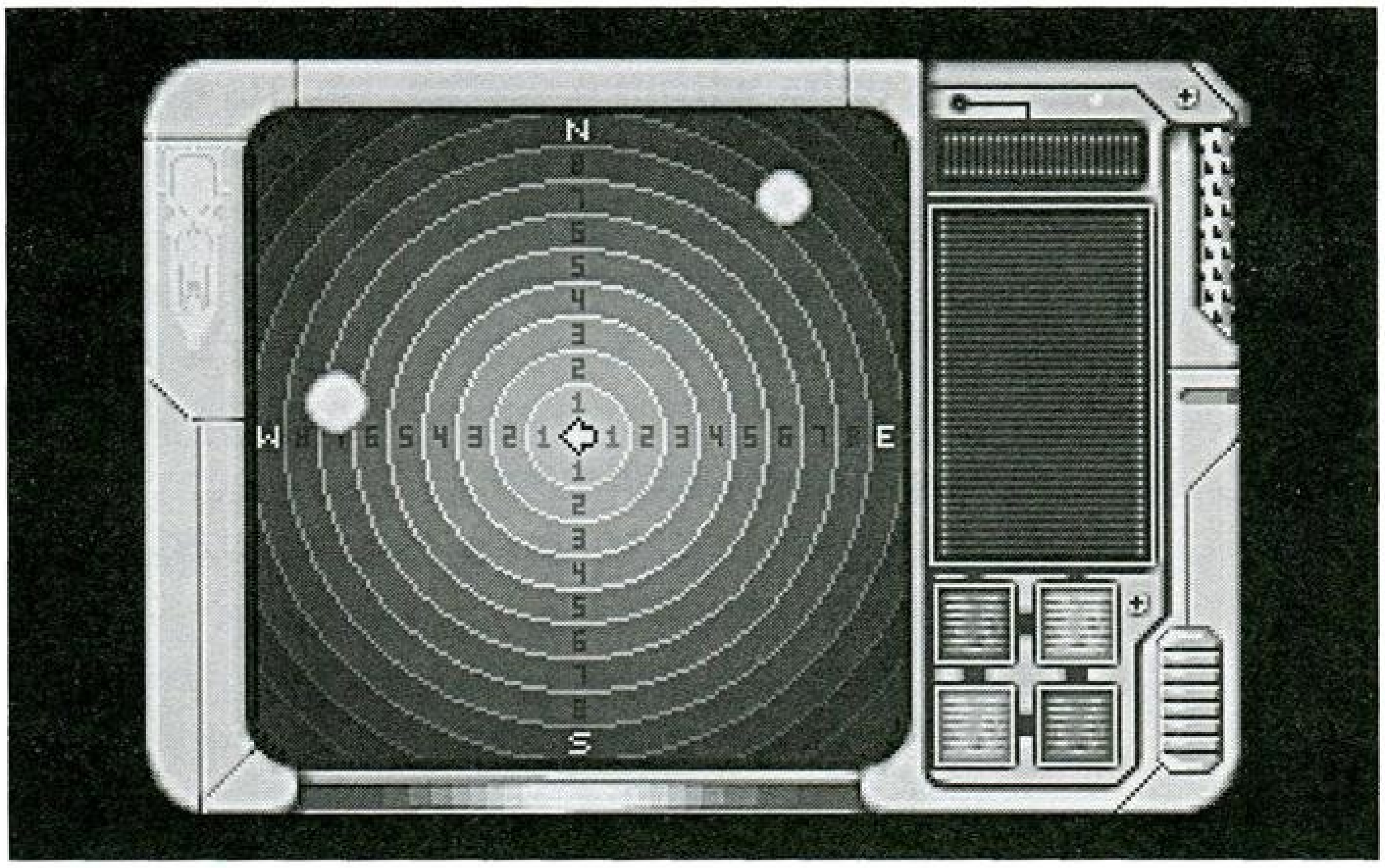


Figure 8-17
Using the motion scanner.

X-COM units as well as aliens. If you use the scanner at the beginning of a turn, it isn't a problem. If you use it at the end of a turn, however, all your own units show up as blips cluttering the display.

For these reasons, the motion scanner is a useful tool, but it never completely replaces a good, old-fashioned human search party.

USING RANGED WEAPONS

To use a ranged weapon, the weapon must be in the soldier's hand. On the Battlescape control bar, click on the weapon. A list of firing choices appears for the weapon, as shown in Figure 8-18.

To choose an option, click on it. The movement cursor disappears and is replaced by the target cursor: a circle with arrows pointing toward its center. Move the cursor onto the target, as illustrated in Figure 8-19. When it is centered on a target, the cursor begins to flash yellow. Click the left mouse button to fire the weapon.

Although the target may be visible to the soldier, it is possible that some object may be between the soldier and the alien, preventing a clear shot. When this is the case, the message "No line of fire" appears in the Soldier Information box. Move the soldier slightly so that the intervening object no longer blocks the target.

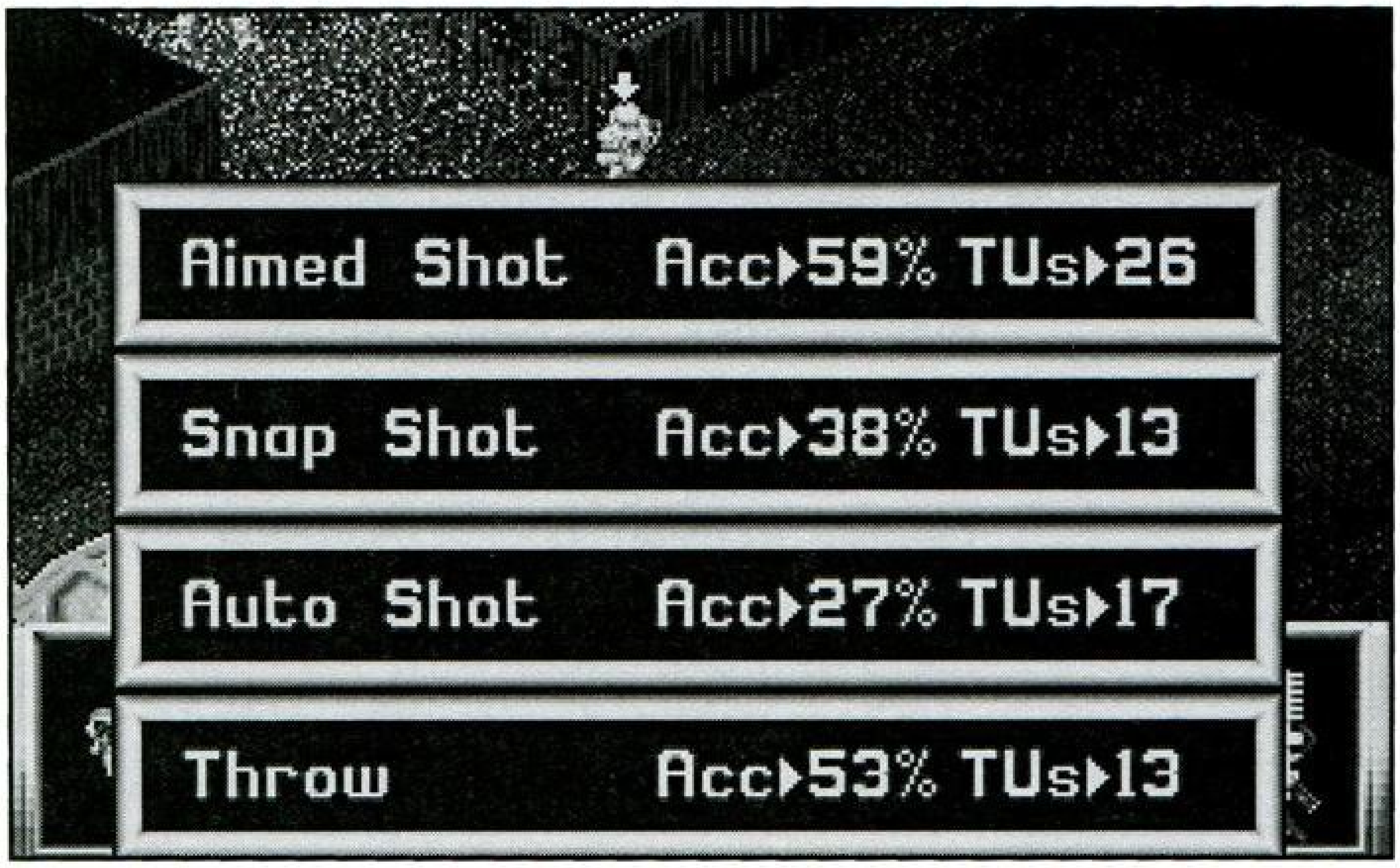


Figure 8-18
Firing options for a ranged weapon.

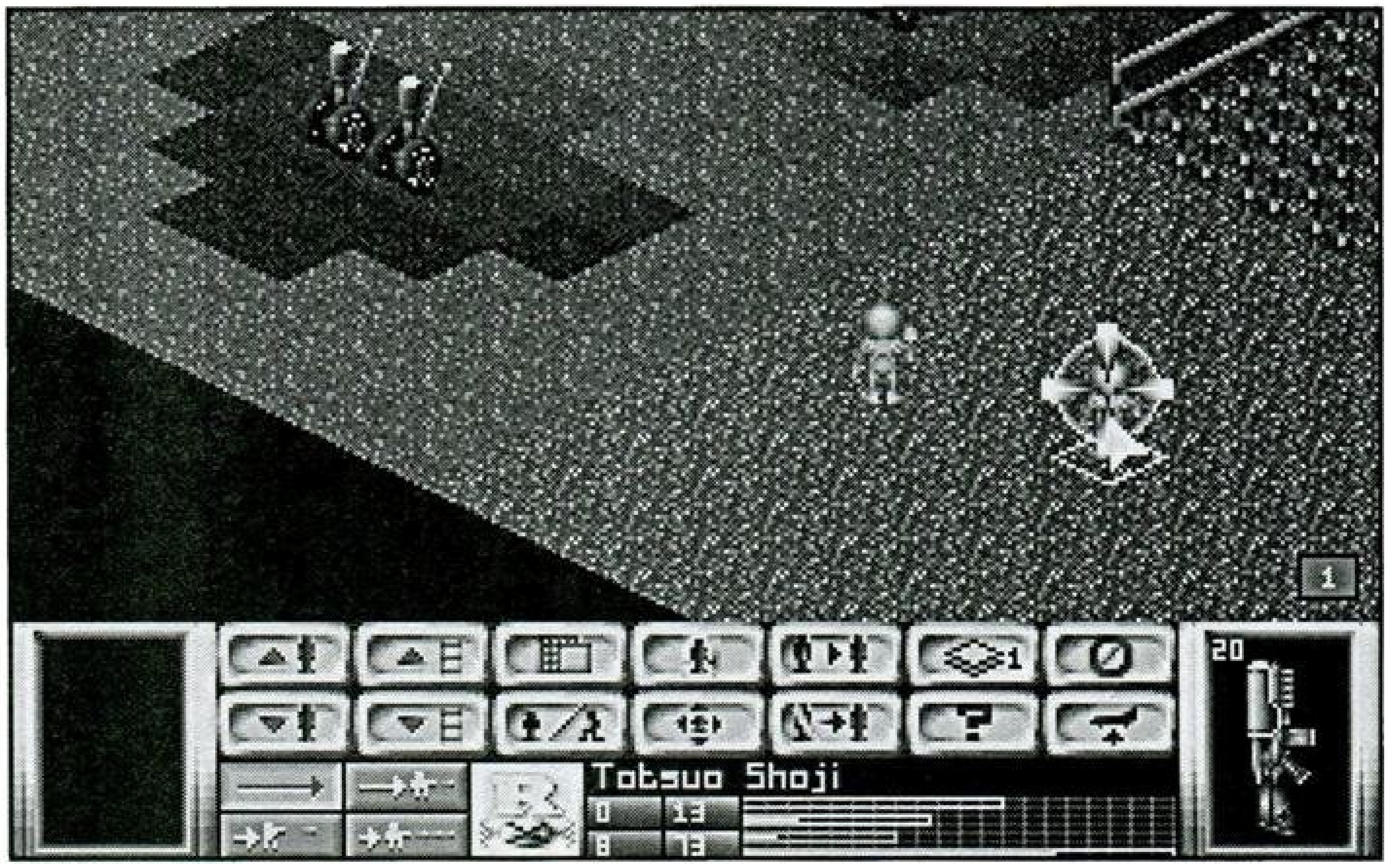


Figure 8-19
A Sectoid, targeted for death.

To abort the decision to shoot at any time, click the right mouse button to return to movement mode.

Choosing a Ranged Weapon

The weapon chosen for a soldier should be based on the soldier's statistics. Soldiers with low firing accuracy should be given weapons that use high-explosive ammunition. That way, even if the soldier doesn't score a direct hit on the target, a nearby detonation of the explosive may still inflict damage on the alien. Good weapons for soldiers with low firing accuracy are the heavy cannon, autocannon, rocket launcher, and blaster launcher. Soldiers with high firing accuracy should be given high-powered weapons that require direct hits in order to score damage, such as rifles, laser rifles, plasma rifles, and heavy plasmas.

If a soldier has low strength, he should be given a light weapon. These soldiers are best suited to using pistols, laser pistols, and plasma pistols. These weapons are less accurate than their rifle counterparts are, but their lighter weight still allows weaker soldiers to move effectively.

As a rule, it is wise to upgrade your soldiers' weapons as new technology becomes available. Weapons based on advanced or alien technology are more powerful, more accurate, and usually much faster to fire than older Earth designs are.

The characteristics of all ranged weapons available in the game are shown in Table 8-5. A full description of each weapon is in Chapter 4, "X-COM Hardware."

Determining Ranged WeaponAccuracy

As you know, each soldier has a statistic called Firing Accuracy, which denotes the soldier's ability to use ranged weapons. In addition, each weapon has an accuracy rating for each type of shot it can fire (auto-shot, snap shot, and aimed shot). The base percentage chance for a soldier to hit a target is determined by using the following formula:

(Firing accuracy) x (weapon accuracy) = (base chance to hit)

For example, a soldier has a firing accuracy of 50, and she is firing an auto-shot from a plasma pistol. The accuracy of a plasma pistol auto-shot is 50 percent:

(50) x (50%) = 25%

The base chance to hit the target is 25 percent.

The base chance to hit a target is affected by other factors also, which add or subtract from the base chance. These factors are shown in this list:

Soldier is kneeling: Base chance to hit is increased by 15 percent.

Soldier is firing a two-handed weapon with one hand: Base chance to hit is decreased by 20 percent (all ranged weapons except for the pistol, laser pistol, and plasma pistol are two-handed weapons).

Soldier has a wound to the head or gun arm: Base chance to hit is decreased by 10 percent per wound.

Soldier is in poor general health: Base chance to hit is decreased by as much as 25 percent. The soldier's health modifier is determined by the percentage of health points the soldier has lost because of injury; the maximum modifier is–25 percent. For example, a soldier has a health statistic of 40, and he has lost 10

Table 8-5 Statistics for Ranged Weapons (Part A)

Weapon	Cost	Ammo Type	Ammo Cost	# Shots
Pistol	$800	Pistol clip	$70	12
Rifle	$3000	Rifle clip	$200	20
Heavy cannon	$6400	HC AP/HE/I Ammo	$300/500/400	6
Auto cannon	$13,500	AC AP/HE/I Ammo	$500/700/650	14
Rocket launcher	$4000	Small/Large/I Rocket	$600/900/1200	1
Laser pistol	$8000	—	—	—
Laser rifle	$20,000	—	—	—
Heavy laser	$32,000	—	—	—
Plasma pistol	$56,000	Plasma pistol clip	$2000	26
Plasma rifle	$88,000	Plasma rifle clip	$3000	28
Heavy plasma	$122,000	Heavy plasma clip	$6000	35
Small launcher	$78,000	Stun bomb	$7000	1
Blaster launcher	$90,000	Blaster bomb	$8000	1

health points to injury. He has lost 25 percent of his total health. His firing accuracy modifier is determined by taking the maximum deduction (–25 percent) and multiplying it by the 25 percent loss of health. The soldier's firing accuracy modifier is–6.25%.(25% x–25% =–6.25%).

All modifiers are cumulative. For example, the same soldier in the preceding example has a firing accuracy of 50; in addition to his poor health, he has a wound to the gun arm and is kneeling. He fires a snap shot with a laser rifle. His chance to hit is determined as follows:

Base chance: Firing accuracy = 50

Laser rifle (snap-shot) = 65 percent

Base chance to hit (50% x 65%) = 32.5 percent

Modifiers: Poor health = –6.25 percent

Wound to gun arm = –10 percent

Table 8-5 Statistics for Ranged Weapons (Part B)

Damage/Ammo Type						Accuracy			Time Units to Fire		
AP	**HE**	**I**	**Laser**	**Plas.**	**Stun**	**Auto**	**Snap**	**Aimed**	**Auto**	**Snap**	**Aimed**
26	—	—	—	—	—	—	60%	78%	—	18%	30%
30	—	—	—	—	—	35%	60%	110%	35%	25%	80%
56	52	60	—	—	—	—	60%	90%	—	33%	80%
42	44	48	—	—	—	32%	56%	82%	40%	33%	80%
—	75 100	90	—	—	—	—	55%	115%	—	45%	75%
—	—	—	46	—	—	28%	40%	68%	25%	20%	55%
—	—	—	60	—	—	46%	65%	100%	34%	25%	50%
—	—	—	80	—	—	—	50%	84%	—	33%	75%
—	—	—	—	52	—	50%	65%	85%	30%	30%	60%
—	—	—	—	80	—	55%	86%	100%	36%	30%	60%
—	—	—	—	115	—	50%	75%	110%	35%	30%	60%
—	—	—	—	—	90	—	65%	110%	—	40%	75%
—	200	—	—	—	—	—	—	120%	—	—	80%

Kneeling = +15 percent
Final chance to hit = 31.25 percent

Two more factors involved in determining firing accuracy are less easy to quantify. These factors are distance to the target and the target's size. Several random factors are involved in determining the effects of distance and target size on a soldier's firing accuracy, and all are figured into the final algorithm that determines whether a shot hits the target. Because these factors change from shot to shot, it is impossible to judge these effects accurately. To make a rough approximation, however, you can get relatively close by figuring that targets at twice the distance away are twice as hard to hit. In other words, a target 20 squares away has a distance modifier twice that of a target 10 squares away. Target size works the same way. (The "size" of each alien is listed along with all other alien statistics in Chapter 9, "The Aliens.")

USING THROWN WEAPONS

Like ranged weapons, thrown weapons (such as grenades and high-explosives) must be in a soldier's hand in order to use them. To use a thrown explosive, click on its icon on the Battlescape control bar. When you do, a list of options appears, as shown in Figure 8-20.

Grenades and other thrown explosives must be primed before they are thrown. All but one of these have a built-in timing device that allows the soldier to set the time of the explosion anywhere from 0 to 26 turns following the turn in which it is primed. The exception is the proximity grenade, which goes off in response to nearby movement rather than at any specific time. Priming an explosive device requires 50 percent of a soldier's time units. After an explosive is primed, it must be thrown. You cannot "unprime" the explosive.

After the explosive is primed, click on its icon again. This time, the only available option is to throw the weapon. When you click this option, the cursor changes to the throw cursor. Move the cursor to the place you want to throw the explosive and click the left mouse button. If you decide not to throw the weapon, click the right mouse button.

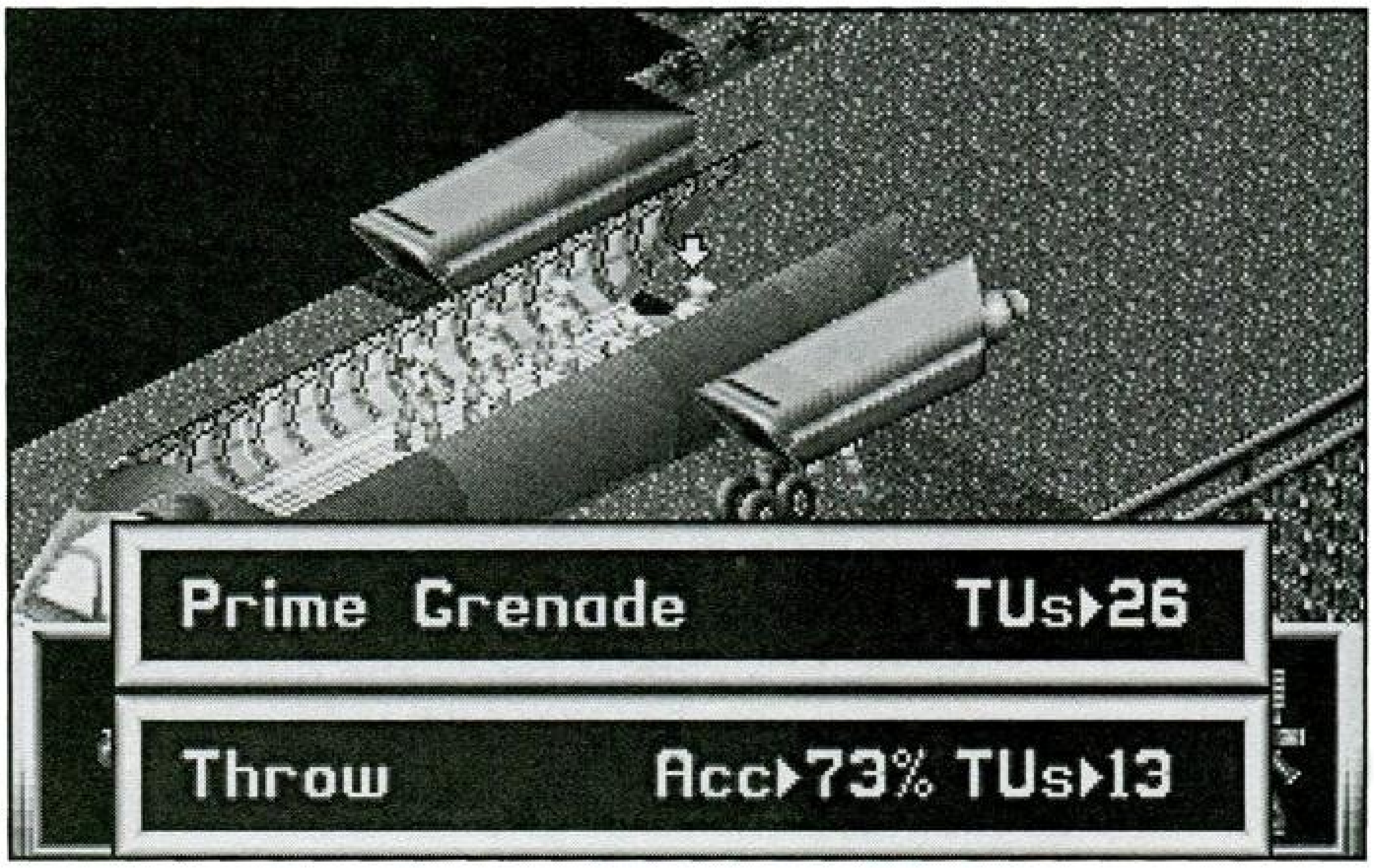


Figure 8-20
Options for a thrown explosive.

Throwing any object, including an explosive device, requires 25 percent of the soldier's base time units. In other words, to prime and throw an explosive uses 75 percent of a soldier's base time-units total. For this reason, it is usually best to prime and throw an explosive device before the soldier moves. Otherwise, if you miscalculate and use up just one too many TUs, your soldier can easily end up carrying a primed grenade. This situation may be desirable in some instances; the grenade does not explode until the soldier lets go of it. If the soldier carries it around primed, it is always ready to use. If the soldier panics, is killed, or becomes unconscious, however, the grenade is dropped and it goes off. For this reason, it is not wise to carry primed grenades for extended periods.

If the chosen target is out of range of the throw or an obstruction of some sort is blocking the throw, the message "Can't throw here" appears in the Soldier Information box. When this occurs, choose a new target or move the soldier to provide a clear throwing path.

Table 8-6 shows the statistics for thrown explosive weapons.

Determining Thrown-Weapon Accuracy

Determining the accuracy of thrown weapons is similar to determining the accuracy of ranged weapons. Because thrown weapons

Table 8-6 Statistics for Thrown Explosive Weapons

Grenade Type	Cost	Timer Delay	Time Units to Prime	Time Units to Throw	Damage
Grenade	$300	0–23	50%	25%	50
Smoke grenade	$150	0–23	50%	25%	60*
Proximity grenade	$500	Special**	50%	25%	70
High-explosive	$1500	0–23	50%	25%	110
Alien grenade	$6700	0–23	50%	25%	90

* Smoke only

** Has a proximity detonator triggered by movement in adjacent squares have no accuracy rating for the weapons themselves, the base chance to hit a target with a thrown weapon is equal to the soldier's Throwing Accuracy statistic. So a soldier with a throwing accuracy of 55 has a base chance of 55 percent to hit the desired target.

The base chance to hit a target with a thrown weapon is affected by most of the same factors as with ranged weapons:

Soldier is kneeling: +15 percent

Soldier has a wound to the head or throwing arm:–10 percent per wound

Soldier is in poor general Health: As much as–25 percent

The Effects of Range on Explosive Damage

The damage rating shown for each thrown explosive or other high-explosive weapon is the damage inflicted on a target in the square in which the weapon hits and explodes. Explosions affect a wide area, but the damage inflicted by the explosion decreases with distance from the target. Each square represents a deduction of ten points of damage as you move away from the point of the explosion (see Figure 8-21).

OPPORTUNITY FIRE

Most weapons fire in the game takes place during separate movement and combat phases: Aliens fire during their turn, and X-COM units fire during X-COM's turn. The exception to this rule is called opportunity fire.

If a unit has enough time units left over to fire a shot when you end the X-COM movement phase, that unit may be able to automatically fire at an alien that strays into view during the alien's turn. In fact, the soldier may be able to fire a shot before the alien can fire, if the soldier's reactions are high enough. If sufficient time units remain, several exchanges of opportunity fire may occur in a single confrontation.

It is usually a good strategy to leave at least some of your units with enough TUs for opportunity fire. Often, a lucky opportunity shot may be the key to success in a ground assault.

When a soldier performs opportunity fire on a ground assault mission, her reaction statistic may be increased at the end of the mission.

0	0	0	0	0	0	0	0	0	0	0
0	10	10	10	10	10	10	10	10	10	0
0	10	20	20	20	20	20	20	20	10	0
0	10	20	30	30	30	30	30	20	10	0
0	10	20	30	40	40	40	30	20	10	0
0	10	20	30	40	50	40	30	20	10	0
0	10	20	30	40	40	40	30	20	10	0
0	10	20	30	30	30	30	30	20	10	0
0	10	20	20	20	20	20	20	20	10	0
0	10	10	10	10	10	10	10	10	10	0
0	0	0	0	0	0	0	0	0	0	0

Overhead View

0	10	20	20	20	20	20	20	20	10	0	Level 3
0	10	20	30	30	30	30	30	20	10	0	Level 2
0	10	20	30	40	40	40	30	20	10	0	Level 1
0	10	20	30	40	50	40	30	20	10	0	Level 0

Side View

▨ = Point of impact

Figure 8-21
The reduction of explosive damage due to range; the weapon shown is a standard X-COM Grenade, with an explosive force of 50.

PSIONIC COMBAT

Soldiers trained by a psi-lab are qualified to use psionic attacks in combat. To do so, the soldier must use a psi amp. This weapon amplifies the soldier's thoughts and projects them into a target's mind. The psi attack can either cause the target to panic, making it ineffective during the next turn's movement and combat, or it may be used to control the actions of the target.

Like other weapons, the psi amp must be in the soldier's hand in order to use it. To use the psi amp in combat, click on its icon. A menu of options appears, as shown in Figure 8-22.

To attempt to panic a target, choose Panic Unit. To attempt to establish mind control over a unit, click Control Unit. Each use of the psi amp requires 25 TUs.

When you have chosen an attack option, the cursor changes from the normal movement cursor to a flashing cursor with a skull inside. Move this psionic attack cursor onto the unit you want to attack and click the left mouse button.

If the attacking soldier is successful in causing a target to panic, the victim becomes ineffective during the following turn and may drop its weapon and run away from its present position.

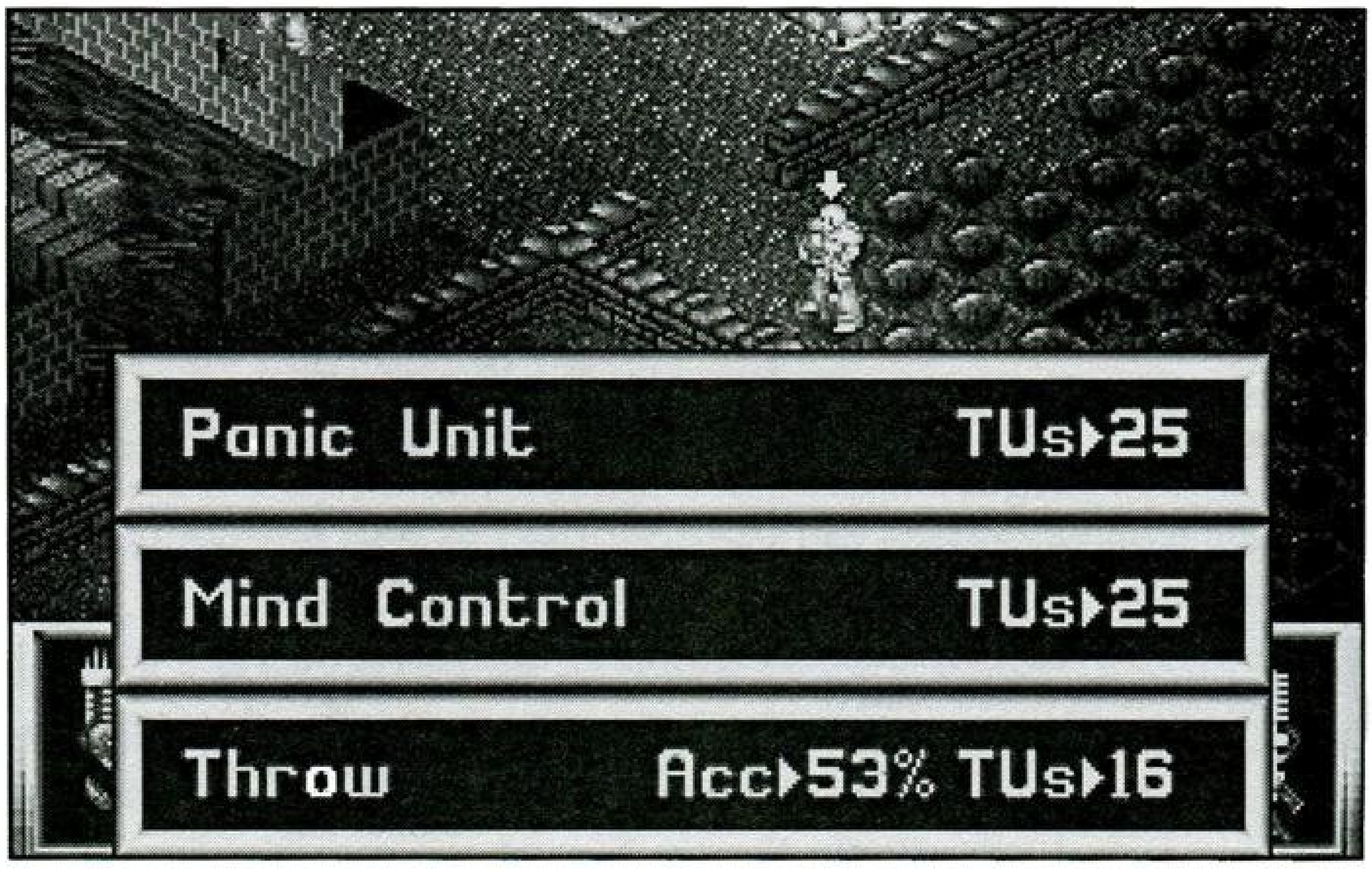


Figure 8-22
Combat menu for the psi amp.

If the attacking soldier is successful in establishing mind control of a target, that target can then be controlled as though it were a member of the X-COM team. It can be ordered to move, shoot, and do just about anything.

Chances for Success in Psionic Combat

Only soldiers with high ratings in psionic strength and psionic skill should use this form of combat, because it is difficult to master.

A soldier's psionic combat strength is determined as follows:

(Psionic strength) x (psionic skill) = (psionic combat strength)

A soldier with a psionic strength of 20 and a psionic skill of 50, for example, has a psionic combat strength of 1000.)

When you use a psionic attack on a target, the base chance of success is determined by subtracting the target's psionic defense from the attacker's psionic combat strength. The defense value against mind-control attacks is higher than the defense value against panic attacks.

The psionic defense against panic attacks is determined as follows:

(Psionic strength) + (psionic skill / 5) + (10) = (panic defense)

The psionic defense against mind-control attacks is determined as follows:

(Psionic strength) + (psionic skill / 5) + (30) = (mind control defense)

So the base chance of success for a psionic attack is determined as follows:

(Attacker's psionic combat strength) - (target's psionic defense) = (base chance)

For example, a soldier with a psionic combat strength of 1000 attacks an alien with a psionic defense of 950. The base chance of success is 1000 [nd] 950, or 50 percent.

Psionic attacks decrease in effectiveness over distance.

Defending X-COM Soldiers Against Psionic Attack

When X-COM soldiers fall under alien psionic attack, there is a brief flash around the soldier being attacked. If the attack is successful, the victim either panics or falls victim to alien mind control.

Psionic defense for X-COM soldiers uses the same formula as shown earlier. It is best to have soldiers with the highest possible psionic abilities because they are much less susceptible to psionic attack. This is especially true late in the game, when more psionically endowed aliens tend to show up.

INFLICTING DAMAGE

When you successfully hit your target, the target suffers damage from the attack. Each type of weapon and ammunition produces a different amount and type of damage.

There are eight types of ammunition and damage types in the game. Only six of these are available for use in X-COM weapons. The other two are used only by aliens. The types of ammunition are as follows:

- **Armor Piercing (AP):** A high-velocity shell with an extra-thick casing, designed to cut through armor plating
- **Incendiary (I):** A type of shell designed to explode on impact with the target, setting the target and the surrounding area on fire
- **High Explosive (HE):** A type of shell that also explodes on impact, producing a more powerful explosion than an incendiary round and producing no fire; in addition to ammunition, grenades are also high-explosive weapons.
- **Laser:** A beam of coherent light that burns through most common materials
- **Plasma:** A weapon based on alien technology, this beam is a ball of powerful, energized particles accelerated by an anti-gravity field
- **Stun:** Damage produced by the stun rod and stun bombs is a non-lethal charge that renders a victim unconscious
- **Close Combat:** One of the two damage types used only by aliens, specifically Reapers, Chryssalids, Silacoids, and Zombies; inflicted through hand-to-hand (or appendage-to-hand) attacks
- **Acid Spit:** An attack used only by Celatids; their saliva is extremely toxic and corrosive

The amount of damage each type of attack inflicts varies depending on the weapon. The damage for each type of ammunition is shown is described in Chapter 4, "X-COM Hardware". Damage for alien-specific weapons, such as Acid Spit, is shown in Chapter 9, "The Aliens".

The amount of damage inflicted by an attack also depends on the type of armor or natural protection the target has. Table 8-7 shows the damage percentage modifiers for each type of attack against various types of alien, human, and mechanical targets. The target types are represented by the numbers listed below:

1. Soldier with no armor; civilian; Sectoid; Celatid; Floater
2. Personal armor
3. Power suit/flying suit
4. Tanks/hovertanks
5. Snakeman
6. Ethereal
7. Muton
8. Silacoid
9. Chryssalid
10. Reaper
11. Sectopod
12. Cyberdisc
13. Zombie

STUNNING ALIENS

To capture an alien alive, the alien must be stunned. A ground assault ends when all alien units have been either stunned or killed. All aliens that are stunned when the ground assault ends are returned to the base, where they are kept in an alien-containment module until your scientists have a chance to interrogate them.

The best way to stun an alien is to use either the stun rod or the small launcher. The stun rod can be dangerous because you must be right next to an alien to use it and because it doesn't inflict much damage. The small launcher can fire stun bombs from a distance, giving you a much better chance at stunning an opponent.

Table 8-7 Damage Modifiers Against Various Forms of Protection

	1	2	3	4	5	6	7	8	9	10	11	12	13
Armor piercing	100	100	100	100	100	100	60	100	100	100	100	80	60
Incendiary	100	80	0	40	70	70	100	0	80	170	100	100	100
High-explosive	100	100	100	75	100	100	100	130	100	100	80	60	80
Laser	100	100	100	100	100	100	100	100	100	100	150	100	70
Plasma	100	100	100	100	100	100	100	100	100	100	80	100	70
Stun	100	90	80	100	100	80	100	100	90	100	100	100	0
Close combat*	120	100	100	90	100	100	100	100	100	100	100	100	100
Acid spit**	160	110	100	40	100	100	100	100	100	100	100	100	100

*Reapers, Chryssalids, Silacoids, and Zombies only

**Celatids only

Aliens may also be stunned accidentally. If they are close to unconsciousness, a shot from a non-stun weapon may cause them to be stunned rather than killed. You can tell when this happens because an alien that has been stunned makes no noise when it falls.

Just like X-COM units, aliens become unconscious when the amount of stun damage they take is equal to their Health statistic. They also recover in the same manner as humans do, so make sure that you keep an eye on any alien you stun to make sure that it stays that way. It is a good idea to send one of your soldiers into the square where the alien has fallen and take its weapons away. That way, if it does wake up, it should remain relatively harmless.

If you want, a soldier can pick up a stunned alien and carry it back to the landing craft. However, there is really no reason to do so. All unconscious aliens are automatically taken with you when you complete the ground assault.

The stunning and capture of aliens plays a key role in the game. Without capturing aliens alive, it is impossible to research certain topics that are necessary to locate the main alien base and win the game.

TAKING DAMAGE (HEALTH)

Each of your soldiers (and each of the other potential targets in the game) has a certain amount of armor or natural protection. Damage points inflicted on the soldier or target are first subtracted from the armor rating. After armor or natural protection is gone, each point of damage scored against the soldier or target is subtracted from its Health statistic. After Health reaches 0, the unit becomes unconscious. When Health falls below 0, the unit dies. Health damage to non-living units (such as tanks) is handled in a similar way, except that these units cannot become unconscious: they are destroyed when their Health statistic reaches 0.

Stun Damage

Certain weapons are designed not to inflict mortal wounds but to stun the target and allow it to be captured. Both the stun rod and the stun bomb fall into this category. Stun damage may also be caused by smoke inhalation.

A soldier or other unit may take stun damage up to the total amount of its Health statistic. After stun damage reaches this level, the unit becomes unconscious. While it's unconscious, it recovers at a rate of several points per turn and eventually recovers entirely.

Fire and Smoke Damage

When incendiary ammunition is being used or when flammable objects explode because of weapons fire, a fire develops. Soldiers and other targets who end their turn within a fire, or who catch fire as a result of being too close to the explosion, suffer damage from the fire.

Units that catch fire receive from 5 to 10 damage points per turn until the fire is out. Units standing in a fire receive from 1 to 12 damage points per turn. Armor, no matter what type, provides no protection against fire, although certain units and aliens are more or less susceptible than others. The actual damage is calculated by taking the maximum damage possible and multiplying it by the unit's susceptibility to fire. Susceptibility to fire is determined by referring to the Incendiary line on the damage chart shown in Table 8-7.

Explosions often leave behind clouds of thick smoke in the vicinity of the explosion. Soldiers who end their turn standing in a cloud of smoke take from 1 to 4 points of stun damage. Power suits and flying suits negate the effects of smoke.

If a unit remains in the smoke, the increasing amount of stun damage suffered as a result is shown by a white bar in the center of the Health line on the Soldier Data section of the Battlescape control bar, and on the Soldier Data screen (see Figure 8-23).

After the amount of smoke damage equals the soldier's total Health statistic, the soldier becomes unconscious.

Fatal Wounds

In addition to loss of health, the soldier may also receive fatal wounds to one or more areas of her body. Any fatal wounds received by a soldier appear on her Soldier Data screen in the Fatal Wounds statistic area.

As shown earlier, fatal wounds to the head and the gun arm reduce the soldier's firing and throwing accuracy. In addition, fatal wounds have several other effects on a soldier's performance:

- Each fatal wound to the left or right leg reduces the soldier's time units by 10 percent.
- Each fatal wound to the body reduces the soldier's stamina (energy) by 10 percent.

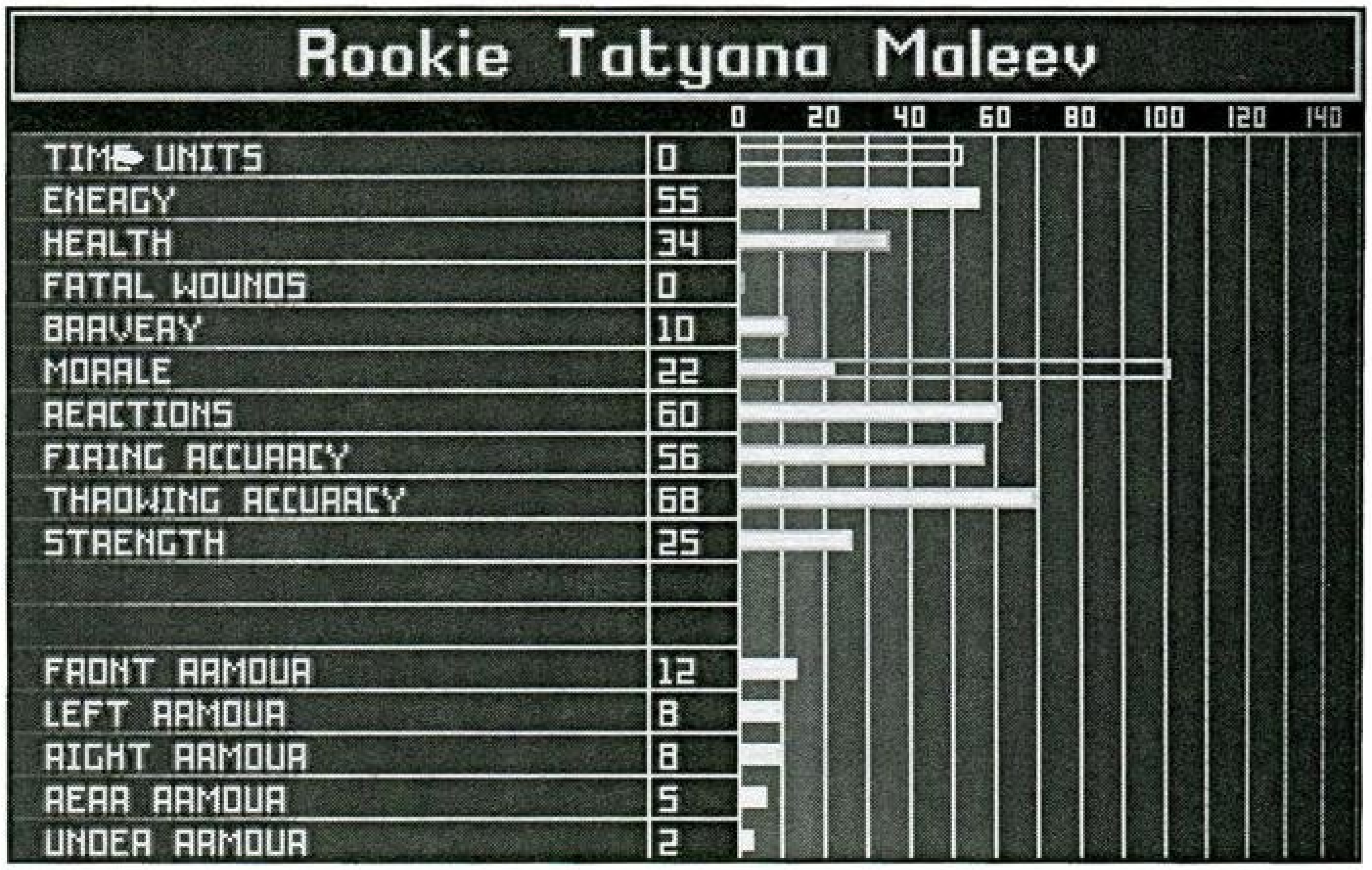


Figure 8-23
Data display of a soldier taking smoke damage.

Rookie Tatyana Maleev

TIME UNITS	0
ENERGY	55
HEALTH	34
FATAL WOUNDS	0
BRAVERY	10
MORALE	22
REACTIONS	60
FIRING ACCURACY	56
THROWING ACCURACY	68
STRENGTH	25
FRONT ARMOUR	12
LEFT ARMOUR	8
RIGHT ARMOUR	8
REAR ARMOUR	5
UNDER ARMOUR	2

Healing the Wounded

At the beginning of the game, a wounded soldier's only hope for life is to survive the ground assault and make it back to an X-COM base. When a wounded soldier returns from a ground assault, the soldier is automatically removed from active duty and treated. When his wounds are healed, the soldier is returned to duty. The unhappy truth, however, is that badly wounded soldiers don't always make it back from a ground assault and end up dying on the battlefield.

Fortunately, one of the first technologies that can be researched is the medi-kit. This portable unit contains a combination of diagnostic and healing equipment that may be used by any soldier to treat the wounded in the field. After you have researched the medi-kit, you should build several of them and take along at least one on every mission.

To use the medi-kit, it must be in a soldier's hand. Move into a square adjacent to the wounded party (or, if the wounded person is unconscious, move into her square), and click on the medi-kit. This step brings up an option menu, as shown in Figure 8-24.

Click on Use Medi-Kit to bring up the medi-kit controls. This display, which shows a body diagram of the injured soldier, has three colored buttons along the right side. The medi-kit controls are shown in Figure 8-25.

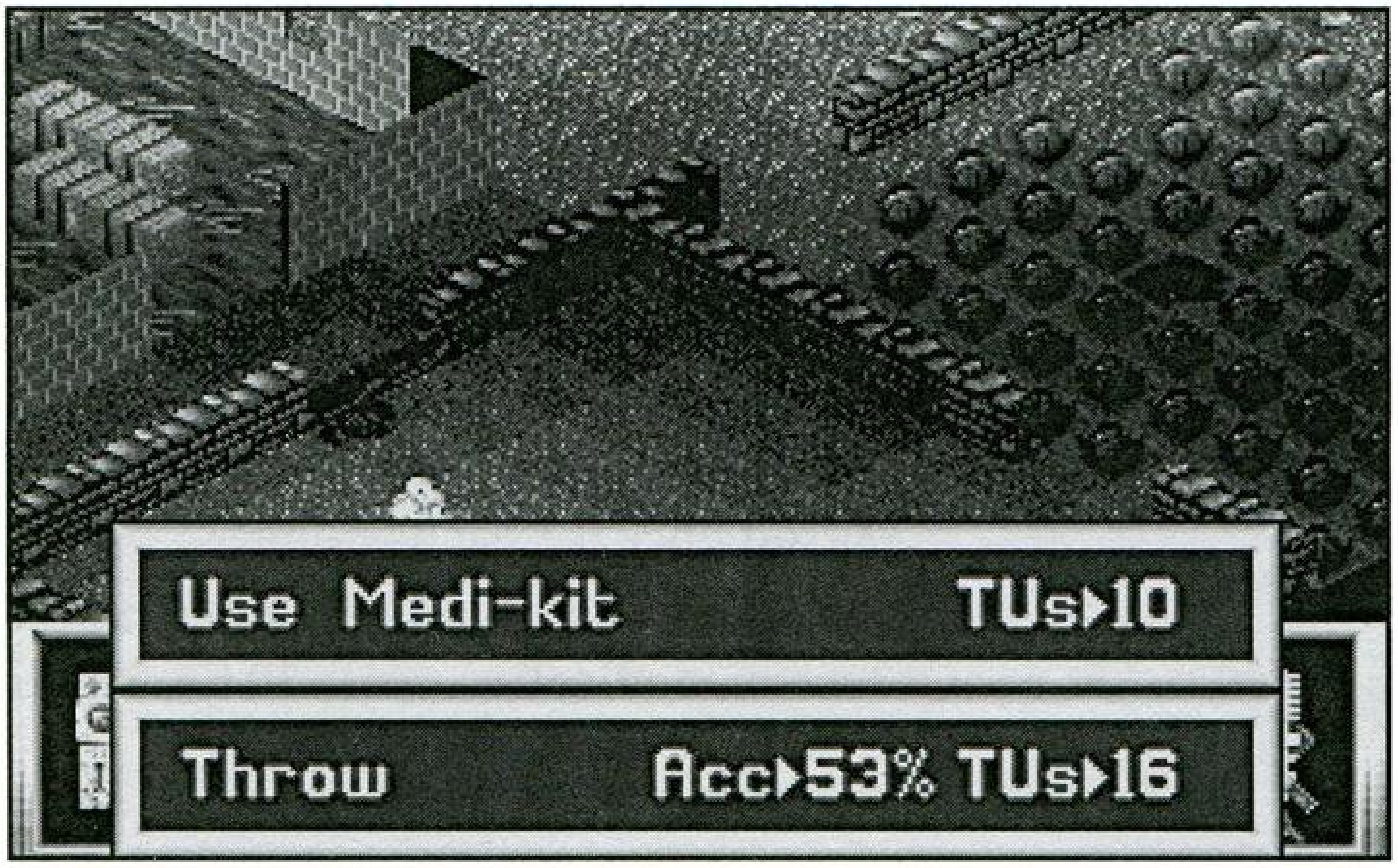


Figure 8-24
Medi-kit options.

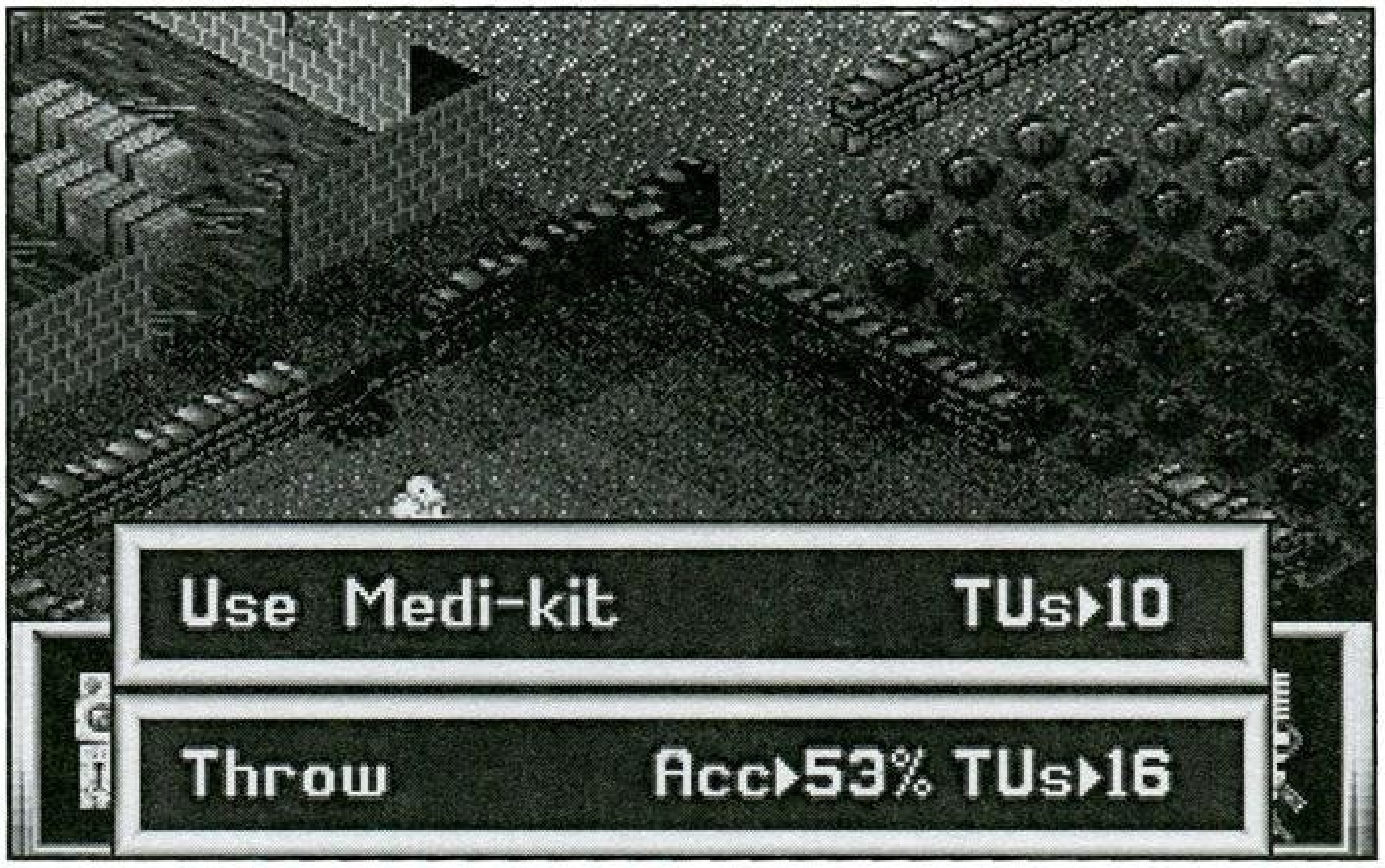


Figure 8-25
The medi-kit controls.

The body diagram shows the location of any fatal wounds to the soldier by highlighting the injured body part in red. The number appearing beside the wounded body part indicates the number of fatal wounds to that area.

The colored buttons to the right are used to administer medication to the injured soldier. The numbers next to the buttons show the number of each type of medication remaining. Each button performs a different function:

Pain Killer (Green): Restores the morale of the injured soldier, up to the amount of Health points that have been lost. (If a soldier has lost 10 points of health, each dose of painkiller increases the soldier's morale from 1 to 10 points.)

Stimulant (Orange): Helps to revive unconscious soldiers and may restore some lost Health points.

Healing (Blue): Each dose heals one critical wound. Click on the wounded body part on the display, and then click the blue button once for each wound.

Ten doses of each type of medication are in each medi-kit. Each dose of medication costs 10 time units to administer.

MORALE

When the battle begins to turn in the favor of the aliens, your soldiers may have problems dealing with the atmosphere of defeat. They may go into a state of panic — or worse!

Whether a soldier panics in battle is a function of her morale level. Morale is influenced in a positive way by every officer (above the rank of sergeant) who is on the mission. Another positive influence is when an alien gets killed. Morale is influenced negatively when a soldier is wounded, when the battle is turning against him, or when another X-COM soldier dies. If the dead soldier was an officer, the negative effect on morale is worse.

If a soldier's morale drops below 50, there is a chance each turn that the soldier can panic. The equation used to determine whether a soldier panics as a result of morale loss is as follows:

100 – (2 x Morale)%

For example, a soldier has a morale rating of 40. The soldier's chances of panicking are shown in this line:

100 – (2 x 40)% or 20%

When a soldier enters a state of panic, one of the following things occurs:

- Soldier freezes in his current position
- Soldier drops her weapon and runs away in a random direction to seek cover
- Soldier goes berserk and fires his weapon in random directions

In each of these situations, the soldier uses all her time units for the turn and is therefore unable to perform any actions until the next turn.

Panic can also be brought about as the result of a psionic attack.

Chapter Nine

THE ALIENS

Now that you are familiar with the people and operations that comprise X-COM, it's time to see what you're up against.

The increasing UFO activity around the world is a far-reaching operation that is the result not of a single alien race but of a unified organization of many different races and species of aliens. Like X-COM, these aliens of widely varying origins combine their forces to achieve their goal. In their case, the goal is the eradication of the human race and the complete domination of Earth—certainly a much less noble goal than that of X-COM. But, like the X-COM forces, this unified collection of aliens does not stop until it completes its goal or dies in the attempt.

To combat such powerful forces of evil, knowledge is certainly the best weapon. Knowing the strengths and weaknesses of each type of alien before you enter a battle is much more effective in the long run than learning through trial and error at the cost of dozens of soldiers and lots of valuable equipment.

This chapter gives you all the information you need in order to know what makes members of each alien race tick. It shows what they can do to you if they're given the chance, and it shows each alien's weak spot so that their chance to attack you may be much less likely to occur.

ALIEN DESCRIPTIONS

Twelve different races of aliens make up the attack force plaguing Earth. A number of these species possess a high order of intelligence, and others are genetically engineered to be simply terrorist fighting machines. One of the alien types, the Zombie, is a life-form that is not an alien at all, but rather a mutated human who has fallen victim to an alien attack.

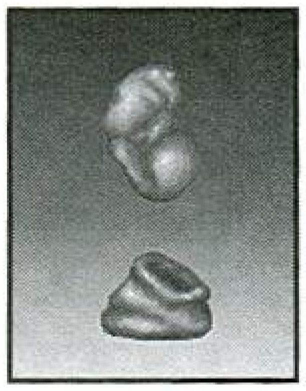
Within the alien races that possess intelligence are a number of subclasses, each of which performs a different type of task. Each intelligent alien race may contain some or all of the following subclasses:

- Soldier
- Navigator
- Engineer
- Medic
- Leader
- Commander

Each subclass often has higher or lower ability scores, based on rank and position, with the soldier as the lowest rank and the commander as the highest.

This section contains descriptions of each of the alien types, along with an illustration of each alien.

CELATID



This small, strange creature is blob-like in appearance, with no discernible limbs or appendages. It is extremely aggressive and moves about easily because of its natural ability to float above the ground.

Celatids have only average intelligence, but they possess some mental capabilities that clearly surpass those of humans. First, they can track human brain waves. This capability allows them to home in on a soldier or other human even before the target is within the creature's line of "sight." Second, although it has no capability to launch psionic attacks, the Celatid has a fairly high resistance to psionic attacks launched against it.

This creature nearly always accompanies the Muton race.

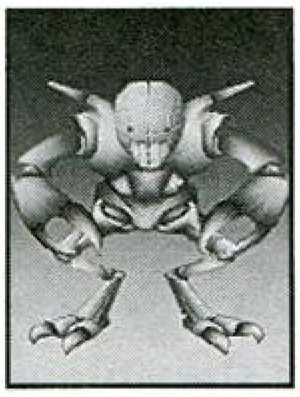
The autopsy of this strange creature shows that the core of its body consists of a naturally evolved anti-gravity system that allows it to hover and move through the air. This seemingly natural organ's efficiency has been enhanced through the use of biomechanical, cybernetic implants.

The Celatid appears to have no separate brain structure. This creature also has no discernible digestive system. It has no complex reproductive system as we know it, but a small organ within each creature contains already fertilized embryos that remain dormant until the Celatid is ready to reproduce. When an embryo becomes active, it quickly grows into a new being, allowing the Celatids to reproduce at an alarming rate.

The largest organ in the Celatid's body is the venom sac. This sac contains a highly corrosive organic acid that the Celatid "spits" at its victims with great accuracy. This acid is powerful enough to kill unarmored beings with a single shot, but its effects are greatly reduced by all forms of armor. When it acquires a target, the Celatid lands close by and launches its venomous attack.

Celatids are not especially vulnerable to any particular type of ammunition or attack.

CHRYSSALID



Chryssalids resemble large, bipedal crabs with powerful claws they use to attack in close combat. They are strong and fast-moving creatures, and their dark coloration makes them difficult to see, especially during night combat. Chryssalids are most often found in the company of Snakemen.

Despite their obvious ability to do so, Chryssalids do not kill their victims. Instead, they quickly approach their victims and inject them with a powerful toxin. This venom has the effect of instantly turning the victim into a Zombie. At the same time the venom is injected, the Chryssalid lays an egg inside the body of its victim. Several turns later, the egg hatches, giving birth to a new Chryssalid and killing the hapless Zombie as it bursts from its body. Chryssalids also attack HWPs occasionally. Tanks and hovertanks are often destroyed as a result of this type of attack.

Chryssalids are always a dangerous threat. Whenever you get to a ground assault being attacked by Snakemen, you can safely assume that Chryssalids are also in the area. It is important to find and neutralize this threat as soon as possible, especially at a terror site, where every citizen in the area is a potential Chryssalid waiting to be born. Be careful of your own soldiers too: The Chryssalids move much faster than your soldiers do. The best way to save your soldiers is to keep them off the ground by using flying suits. If Chryssalids can't reach you, they can't harm you.

An autopsy reveals an extremely high metabolism and a cell growth rate that is faster than any creature previously encountered. It is this incredible rate of cell generation that allows new Chryssalids to be born so quickly after an egg is laid. Each Chryssalid carries 20 eggs that it lays in its victims. The symbiotic relationship, with its victims acting as incubators, allows the Chryssalid race to reproduce.

The Chryssalid brain is well developed, but it seems that its only thoughts are those of reproduction and terror.

Chryssalids have a hard, shell-like skin that acts as fairly efficient armor. This exoskeleton seems particularly vulnerable, however, to incendiary ammunition. The creature is also somewhat more vulnerable to stunning weapons than is the average alien. All other forms of attack and ammunition affect the creature normally.

CYBERDISC

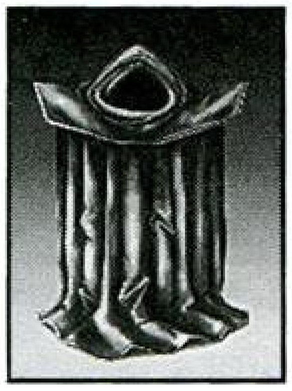
These automated terror weapons resemble miniature flying saucers. They operate under control of the Sectoid race, and their primary function is as a terror weapon.

Cyberdiscs are well-armored and are armed with a plasma weapon. They also possess a miniaturized version of the anti-gravity propulsion systems found in UFOs. This propulsion system allows the Cyberdisc to fly and to easily maneuver through even the most rugged terrain.

Examination of the interior systems of the Cyberdisc show little of its internal structure because quite a bit of damage is inflicted on the robot's systems as a result of opening the outer shell. It seems to be constructed in essentially the same manner as a UFO, only on a much smaller scale. It contains a micro-power unit that provides energy for both the central anti-gravity propulsion system and the robot's weapon. The weapon appears to be a powerful plasma cannon, similar to those mounted on X-COM HWPs or spacecraft.

The outer layer of armor is composed of a sturdy layer of alien alloys that provides protection for the internal systems. This extremely effective armor greatly reduces the damage of armor-piercing and high-explosive weapons and ammunition. All other attacks affect the Cyberdisc normally.

ETHEREAL



Although the Ethereals do not possess the physical power and presence of many of the other alien species, they are nonetheless among the most formidable opponents you encounter. The Ethereals, the highest-ranking and most intelligent of the aliens, are clearly the leaders behind most of the Terran incursion operations, but they seldom appear in person on Earth. They prefer to plan and control operations from their hidden base on Mars, allowing other alien races to carry out their objectives.

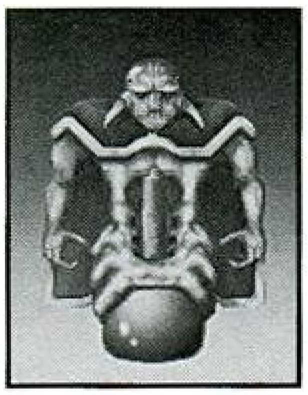
Ethereals possess awesome mental powers, far beyond those of any other alien species. These powers are used for communication between one another and between Ethereals and other alien species. They also use their mental abilities for telekinetic purposes, mostly to allow them to fly. The most prevalent use of the Ethereals' mental capabilities, however, is in combat. Even the lowliest Ethereal soldier has psionic attack capability. In most combat situations, an Ethereal uses psionics in preference to any other means of attack.

Autopsies on Ethereals show their bodies to be physically retarded and incapable of supporting any conventional life functions. The muscular system is severely atrophied, and all internal organs are likewise underdeveloped. Normal sensory input appears to be non-existent; even their eyes do not seem to function.

The brain is the only organ that is fully developed. The Ethereal brain is more highly developed, in fact, than the brain of any other known species. The brain draws a high proportion of the body's blood supply because it performs more functions than all other body parts combined. It is believed that the Ethereal's strong telekinetic capabilities allow it to effectively function with such an underdeveloped physical structure. Even so, it seems impossible that these beings should be able to survive at all with no external means of life support. How the Ethereal's mental powers function to perform so many tasks is a mystery that seems to defy the laws of science.

Despite their apparently weak physical state, Ethereals are no more vulnerable to damage than some of the more physically robust aliens. In fact, Ethereals take *reduced* damage from incendiary ammunition and stunning attacks. All other ammunition and forms of attack work normally against them.

FLOATER



Floaters, which are rather mean and hideous-looking creatures, are among the most frequent aliens encountered during terror missions. Despite their fearsome appearance, they are not particularly difficult to kill. They are, however, well-trained soldiers and naturally predatory beasts. They have also been genetically engineered to enhance their capabilities. They are frequently encountered with Reapers, which are deployed and directed by the Floaters.

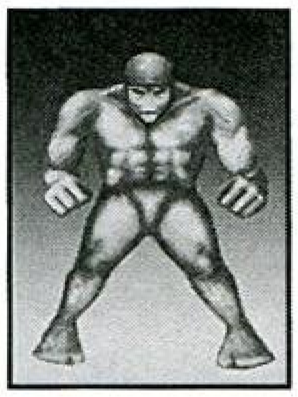
Part of the genetic engineering involved in the creation of the Floater species is the large, spherical device attached to them just below their torso. This anti-gravity unit allows the Floater to hover and move through the air. This creature's flight capability, definitely a point in its favor, helps to make up for its weak armor.

The Floaters have suffered the most genetic alteration of any of the alien species. The autopsy shows that, in order to install the anti-gravity device, the creature's lower body is surgically removed. Most of the Floater's internal organs have also been removed, and special equipment within the well-shielded anti-gravity sphere acts as a life-support system for the being. This shielded system, which functions simultaneously as the Floater's heart, lungs, and digestive system, forms the core of the creature's body.

A Floater's brain is smaller than the human brain, but it possesses average intelligence. It is incapable of psionic attacks, although it does possess some capability to resist psionics. Its eyes and other sensory organs are very well developed.

The replacement of the vital organs with a shielded, artificial life-support system probably indicates that Floaters have been engineered to be able to function effectively in extremely harsh environments. Floaters do not possess any special weakness to any particular weapon or ammunition type.

MUTON



The Muton is a particularly large, humanoid creature that possesses tremendous strength. Whereas the Ethereals are the brains of the operation, the Mutons are definitely the brawn. There are no Muton medics, leaders, or commanders. Their main purpose in life seems to be simply to fight and fly spaceships. Although Mutons seem to possess a relatively high order of intelligence, they seem to rely heavily on telepathic links to the Ethereals for guidance in performing their tasks. Evidence shows that if this link is broken, their mental system begins to break down, and the Muton eventually dies.

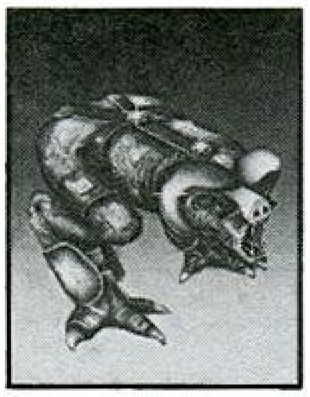
Mutons have a voracious appetite, and unlike most aliens, they do not ingest the liquid nutrient solution produced in alien food chambers. As carnivores, they must ingest large amounts of raw flesh (of any kind) in order to survive.

Autopsy reports show that the Muton's internal organs are well developed and appear to be largely natural and unaltered by genetic engineering. The sex organs appear to have been removed surgically, however, which suggests that some genetic engineering is involved in the propagation of this species.

Another example of surgical alteration in Mutons is the large number of cybernetic implants installed throughout various parts of the body. These implants serve to enhance the functions of the cardiovascular system and basic senses, which produces much-enhanced combat capability in the creature.

The Mutons' "skin" is a heavy, protective layer of organically based armor grafted directly on top of the creature's natural skin, probably at birth. This toughened outer "skin" greatly reduces the effect of armor-piercing ammunition. All other weapons and forms of attack work normally against them. Mutons are among the most difficult aliens to kill, however, because of their extremely high health characteristic, which is a result of their size and physical power. Because of their low level of independent thought, and perhaps as a result of their mind implants, Mutons are the alien race most susceptible to psionic attacks.

REAPER



Reapers are furry, bipedal creatures that tower above most other beings. They are carnivores, with voracious appetites and huge, powerful jaws that can inflict a great deal of damage. They seem to possess only a rudimentary, animal intelligence. Reapers are frequently found in the company of Floaters, who seem to be their "masters."

The primitive, predatory instincts of Reapers make them the perfect weapon for terrorizing Earth citizens. They have no means of ranged attack, but after they are within one square of their victim, they can tear the victim apart with a minimum of effort. They are among the most aggressive of all the aliens in the game.

An autopsy reveals that the Reaper has a number of redundant backup systems in its body. It has two brains, each of which is implanted with cybernetic devices that are apparently receivers which allow external control of the creature. Reapers also have two hearts. This wealth of backup systems makes Reapers a more formidable opponent; they can continue to fight even after they have received a great amount of damage.

These creatures do have their weaknesses, however. They are not particularly fast, and they are fairly easy to get away from. They are also very large and make easy targets, even over a distance. Finally, their shaggy fur makes them almost twice as vulnerable to incendiary ammunition and fire as most other targets.

All other attacks and ammunition types affect the Reaper normally.

SECTOID

The Sectoid race is most commonly associated with UFO "close encounters" throughout recent history; drawings made by many of the people who claim to have seen or been abducted by UFOs over the years bear an uncanny resemblance to the Sectoids.

This resemblance is really not surprising: It seems that the primary mission of the Sectoids is the abduction of humans for study and genetic experimentation. The purpose of these experiments is to gather enough genetic material to be able to cross-breed between humans and aliens and eventually create clones used to infiltrate human society. The Sectoids also seem to be attempting to create a large number of genetic hybrids to increase the efficiency of their hive-like society.

Another task frequently performed by Sectoids is the capture and mutilation of Earth livestock. Although all the reasons for this activity are not known, it is known that Earth animals form the core of the diet for most of the alien races. Cattle are the most frequent victims of Sectoid mutilation and "harvesting," but sometimes even humans become victims of alien appetites.

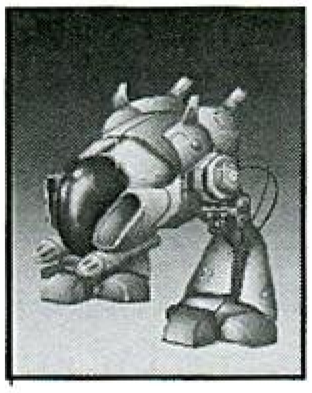
The relatively simple structure of Sectoid anatomy and internal organs suggests that the species may be genetically engineered. They appear to have no reproductive organs and do not possess any visible means for asexual reproduction. Their webbed hands and flat, webbed feet suggest that they may be aquatic in origin.

Autopsies reveal a digestive system that may once have functioned but that now seems dormant. Apparently the Sectoid race has evolved past the need for a digestive tract as we know it and has developed some other way to ingest nourishment. Likewise, its unnaturally small nose and mouth seem to serve little or no function.

In stark contrast, the eyes are extremely well developed. Sectoids possess a high degree of night-vision capability, but they see equally well in full daylight. The Sectoid brain is highly developed, and the leaders and commanders of this race possess strong psionic capabilities.

Although their natural armor varies somewhat between the different classes, Sectoids are affected equally well by all forms of weaponry and ammunition.

SECTOPOD

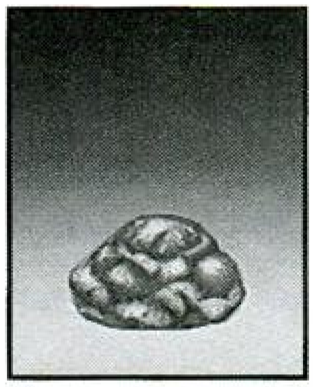


Sectopods are not actually aliens; they are alien *constructions*. These powerful robots are controlled via a telepathic link with their masters, the Ethereals. Because of their heavy armor and powerful weaponry, Sectopods are among the most powerful terror weapons available to the aliens.

Examination of the Sectopod's internal components shows that it is sturdily constructed, with a thick layer of powered armor to protect its internal components. The method of operation utilized by the component parts is unclear. However, separate systems for movement, sensing, weapons, and targeting can be easily identified. The weapon used by the Sectopod is a beam weapon, similar in function and power to terrestrial heavy-laser weapons.

The thick alloy skin of the Sectopod protects it quite effectively, and most attacks do only normal damage. The armor is particularly effective at reducing the damage of plasma and high-explosive attacks. The one major flaw in the robot's design seems to be its sensory system. Due to its nature, the effectiveness of laser attacks on the Sectopod is significantly increased.

SILACOID



This small, silicon-based life-form moves along very low to the ground and produces a great deal of heat. It keeps up its energy by eating rock and other substances from the ground as it moves. It crushes the rock with its powerful muscles and ingests the rock directly, which is in stark contrast to the carnivorous diets of most other alien species.

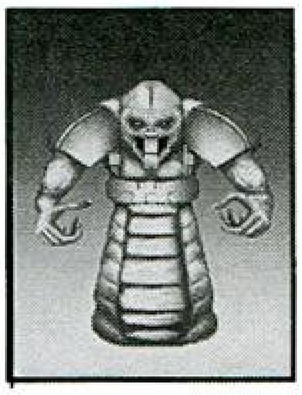
Silacoids possess only a primitive intelligence and are usually controlled by outside forces via telepathy and cybernetic implants. Silacoids are usually seen in the service of the Muton race.

Even in a creature that has been dead for a long time, an autopsy reveals that the core of the Silacoid is extremely hot. This molten core, which seems to be the creature's digestive system, is in keeping with the theory that this alien ingests rocks and earth.

A unique, compact muscular system gives the Silacoid great power and speed. It is this muscular power on which the Silacoid relies when it attacks. It has no ranged attack capability and is therefore forced to be directly in front of a target in order to enter combat.

Silacoids are covered with a rock-like skin composed of various alien minerals. This fact, combined with the creature's unique digestive system, indicates that it probably evolved in an environment which was extremely hot. As a result, fire and incendiary ammunition have no effect on this creature. Silacoids are, however, particularly susceptible to high-explosive ammunition and weapons.

SNAKEMAN



This race of reptile-like beings seems to appear most commonly at terror sites and, occasionally, raids on X-COM bases. No evidence exists to show that Snakemen have any purpose other than to terrorize humans and carry out military actions. Although they seem to possess an intelligence and will of their own, it is believed that the military operations carried out by Snakemen are planned and controlled by some greater, overriding intelligence.

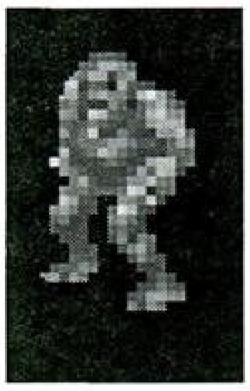
Any resemblance to humanoid body structure ends with the Snakeman's powerful arms and hands. The head resembles nothing more than that of a giant Terran cobra. A tough, scaled skin entirely covers the creature. Enhancing this alien's reptilian appearance is the long, tail-like "foot" that the Snakeman depends on for mobility. Its need to "slither" in this manner often allows it to be heard before it can be seen.

An autopsy reveals that most of the Snakeman's vital organs are protected within this "foot." Its muscular and cardiovascular systems are integrated into one another; a hydraulic principle is used to create the motion provided by the "foot" appendage and to allow for movement of the arms and other parts of the body. The heart functions in a manner similar to that of Terran mammals, but it is by necessity much more powerful, allowing it to drive the alien's unique system of motivation.

The Snakeman reproductive system seems to be very efficient. Reproduction is asexual. Eggs are carried and incubated within the Snakeman's body, and each Snakeman can carry as many as 50 eggs at any time. This efficient and prolific means of reproduction can potentially allow this alien to become a serious threat to Earth, if allowed to freely roam the planet.

The tough, scale-covered skin of this species was genetically designed to withstand harsh environments and especially high temperatures. Incendiary ammunition and fire, therefore, have a reduced damage effect on Snakemen. All other types of weaponry, however, produce normal damage.

ZOMBIE



Of all the creatures you encounter, only the Zombie is not alien in origin. Zombies were once humans—either civilians at a terror site or X-COM soldiers—who were unfortunate enough to have a run-in with a Chryssalid. When a Chryssalid successfully injects its venom into a victim, the victim instantly becomes a Zombie.

Zombies are among the most aggressive creatures you encounter. They seldom run away from a fight, and their high bravery ensures that they almost never panic or go berserk. They are incapable of psionic attacks, but they have extremely high psionic strength, which makes them resistant to psionic attacks from others.

Luckily, the Zombie's strengths are offset by an almost equal number of weaknesses. Because they have fewer time units than even the weakest X-COM rookie, the Zombie's movement and actions during each turn are limited. They have no long-range attack capability, so they must be in an adjacent square to attack. And although their health is better than average, they have a low armor rating.

Because of the Zombie's unique nature, most types of ammunition and attacks have reduced effects. Zombies cannot be stunned; stunning weapons have no effect on these creatures. Armor-piercing ammunition is the least effective ammunition against them, followed by laser and plasma weapons and then high-explosives. The only types of attack that do normal damage to a Zombie are fire and incendiary attacks.

Killing a Zombie has one unfortunate consequence. Chryssalids turn humans into Zombies to act as incubators for the Chryssalid's egg. A Zombie, if allowed to live, after several turns splits open and gives birth to a new Chryssalid. If the Zombie is killed by an X-COM soldier, the Chryssalid inside the Zombie hatches right away. Be prepared! Otherwise, you may find your soldier face-to-face with a bouncing baby Chryssalid with no more TUs left to deal with it.

The best cure for Zombies is prevention. When you enter a ground assault in which Chryssalids are present, hunt down the Chryssalids as quickly as possible to prevent them from creating Zombies. If you don't, you may quickly find yourself surrounded by Zombies and Chryssalids.

ALIEN CHARACTERISTICS

The preceding section gives you good insight into the origin, background, and behavior of each type of alien. In this section, you learn the game statistics for each alien race.

Tables 9-1 through 9-5 list the vital statistics for each alien type you encounter. Each table illustrates the aliens' characteristics on one of the five game difficulty levels, beginner through superhuman.

The following characteristics are listed for each alien:

Alien/Rank: The alien's race and its rank or function.

Flight: Whether the alien can fly.

Height: The alien's relative height when it's standing. Taller creatures are easier to hit than short ones are. An alien with a height of 40, for example, is twice as easy to hit as an alien with a height of 20.

TUs: The number of time units the alien has during each turn.

Health: The number of health points the alien has indicates the number of damage points required to kill it.

Stamina: The amount of energy the alien has; this number decreases as the alien carries out energy-consuming tasks, such as walking through high grass

React: The alien's reactions, or the relative speed with which the alien reacts in battle. This number determines the alien's ability to perform opportunity fire during X-COM's movement phase.

(Cont. on page 260)

Table 9-1 Alien Characteristics (Beginner Level) (Part A)

Alien/Rank	Flight	Height	TUs	Health	Stamina	React	Str	Brave	Firing Acc.	Throw Acc.
Floater Soldier	yes	21	50	35	90	50	40	80	25	58
Floater Navigator	yes	21	50	35	90	50	40	80	25	58
Floater Medic	yes	21	50	35	90	50	40	80	25	58
Floater Engineer	yes	21	50	35	90	50	40	80	25	58
Floater Leader	yes	21	55	40	95	60	47	80	30	58
Floater Commander	yes	21	60	45	100	66	48	80	32	65
Sectoid Soldier	no	16	54	30	90	63	30	80	26	58
Sectoid Navigator	no	16	54	30	90	63	30	80	26	58
Sectoid Medic	no	16	54	30	90	63	30	80	26	58
Sectoid Engineer	no	16	54	30	90	63	30	80	26	58
Sectoid Leader	no	16	54	30	90	63	30	80	26	58
Sectoid Commander	no	16	54	30	90	63	30	80	26	58
Snakeman Soldier	no	18	40	45	80	45	47	80	29	65
Snakeman Navigator	no	18	40	45	80	45	47	80	29	65
Snakeman Engineer	no	18	40	45	80	45	47	80	29	65
Snakeman Leader	no	18	40	45	80	55	47	80	33	65
Snakeman Commander	no	18	45	55	84	65	47	80	29	65
Ethereal Soldier	yes	20	68	55	96	75	48	80	37	80
Ethereal Leader	yes	20	68	55	96	75	48	80	37	80
Ethereal Commander	yes	20	68	55	96	75	48	80	37	80
Muton Soldier	no	21	56	125	90	60	70	80	27	62
Muton Navigator	no	21	56	125	90	60	70	80	27	62
Muton Engineer	no	21	56	125	90	60	70	80	27	62
Reaper	no	23	62	148	90	64	90	80	0	0
Chryssalid	no	21	110	96	140	70	110	100	0	0
Silacoid	no	10	40	114	80	40	70	100	0	0
Celatid	no	12	70	68	90	40	70	90	50	0
Sectopod	no	23	62	120	90	64	90	110	30	0
Cyberdisc	yes	15	62	120	90	64	90	110	30	0
Zombie	no	18	40	84	110	40	84	110	0	0

Table 9-1 Alien Characteristics (Beginner Level) (Part B)

Alien/Rank	Close Acc.	Front Arm.	L/R Arm.	Rear Arm.	Under Arm.	Psi Skill	Psi Str.	Agr.	Intel.	Vps
Floater Soldier	70	4	3	2	6	0	35	2	4	12
Floater Navigator	70	4	3	2	6	0	35	2	5	14
Floater Medic	70	4	3	2	6	0	35	1	6	16
Floater Engineer	70	4	3	2	6	0	35	1	6	18
Floater Leader	70	8	6	4	6	0	40	0	8	25
Floater Commander	70	12	9	6	8	0	45	0	8	35
Sectoid Soldier	76	2	2	1	1	0	40	2	3	10
Sectoid Navigator	76	2	2	1	1	0	40	2	4	12
Sectoid Medic	76	2	2	1	1	0	40	1	5	14
Sectoid Engineer	76	2	2	1	1	0	40	2	6	16
Sectoid Leader	76	2	2	1	1	50	50	1	7	20
Sectoid Commander	76	2	2	1	1	60	50	0	8	25
Snakeman Soldier	54	10	9	8	6	0	40	2	2	15
Snakeman Navigator	54	10	9	8	6	0	40	2	3	17
Snakeman Engineer	54	10	9	8	6	0	40	2	4	20
Snakeman Leader	54	10	12	11	10	0	45	2	5	28
Snakeman Commander	54	13	13	11	10	0	50	2	6	36
Ethereal Soldier	85	18	18	18	18	40	50	1	6	20
Ethereal Leader	85	20	20	20	20	45	60	1	7	30
Ethereal Commander	85	23	23	23	23	50	65	1	8	40
Muton Soldier	78	10	10	10	5	0	25	2	2	15
Muton Navigator	78	12	12	12	8	0	25	2	3	17
Muton Engineer	78	14	14	14	10	0	25	2	4	19
Reaper	80	14	14	14	2	0	35	2	2	25
Chryssalid	80	17	17	17	17	0	50	2	4	25
Silacoid	80	25	25	25	5	0	80	2	3	20
Celatid	80	10	10	10	10	0	60	2	4	20
Sectopod	80	73	65	50	45	0	100	1	4	30
Cyberdisc	80	17	17	17	17	0	100	1	5	20
Zombie	80	2	2	2	2	0	80	2	3	18

Table 9-2 Alien Characteristics (Experienced Level) (Part A)

Alien/Rank	Flight	Height	TUs	Health	Stamina	React	Str	Brave	Firing Acc.	Throw Acc.
Floater Soldier	yes	21	52	35	94	52	42	80	52	58
Floater Navigator	yes	21	52	35	94	52	42	80	52	58
Floater Medic	yes	21	52	35	94	52	42	80	52	58
Floater Engineer	yes	21	52	35	94	52	42	80	52	58
Floater Leader	yes	21	58	40	99	63	49	80	66	58
Floater Commander	yes	21	63	45	104	69	50	80	66	65
Sectoid Soldier	no	16	57	30	94	66	32	80	54	58
Sectoid Navigator	no	16	57	30	94	66	32	80	54	58
Sectoid Medic	no	16	57	30	94	66	32	80	54	58
Sectoid Engineer	no	16	57	30	94	66	32	80	54	58
Sectoid Leader	no	16	57	30	94	66	32	80	54	58
Sectoid Commander	no	16	57	30	94	66	32	80	54	58
Snakeman Soldier	no	18	42	45	84	47	49	80	61	65
Snakeman Navigator	no	18	42	45	84	47	49	80	61	65
Snakeman Engineer	no	18	42	45	84	47	49	80	61	65
Snakeman Leader	no	18	42	45	84	58	49	80	68	65
Snakeman Commander	no	18	47	55	88	68	49	80	61	65
Ethereal Soldier	yes	20	71	55	100	78	50	80	77	80
Ethereal Leader	yes	20	71	55	100	78	50	80	77	80
Ethereal Commander	yes	20	71	55	100	78	50	80	77	80
Muton Soldier	no	21	59	125	94	62	73	80	57	62
Muton Navigator	no	21	59	125	94	62	73	80	57	62
Muton Engineer	no	21	59	125	94	62	73	80	57	62
Reaper	no	23	65	148	94	67	94	80	0	0
Chryssalid	no	21	115	96	146	73	115	100	0	0
Silacoid	no	10	42	114	84	42	73	100	0	0
Celatid	no	12	73	68	94	42	73	90	104	0
Sectopod	no	23	65	120	94	67	94	110	63	0
Cyberdisc	yes	15	65	120	94	67	94	110	63	0
Zombie	no	18	42	84	115	42	88	110	0	0

Table 9-2 Alien Characteristics (Experienced Level) (Part B)

Alien/Rank	Close Acc.	Front Arm.	L/R Arm.	Rear Arm.	Under Arm.	Psi Skill	Psi Str.	Agr.	Intel.	Vps
Floater Soldier	70	8	6	4	12	0	37	2	4	12
Floater Navigator	70	8	6	4	12	0	37	2	5	14
Floater Medic	70	8	6	4	12	0	37	1	6	16
Floater Engineer	70	8	6	4	12	0	37	1	6	18
Floater Leader	70	16	12	8	12	0	42	0	8	25
Floater Commander	70	24	18	12	16	0	47	0	8	35
Sectoid Soldier	76	4	3	2	2	0	42	2	3	10
Sectoid Navigator	76	4	3	2	2	0	42	2	4	12
Sectoid Medic	76	4	3	2	2	0	42	1	5	14
Sectoid Engineer	76	4	3	2	2	0	42	2	6	16
Sectoid Leader	76	4	3	2	2	52	52	1	7	20
Sectoid Commander	76	4	3	2	2	63	52	0	8	25
Snakeman Soldier	54	20	18	16	12	0	42	2	2	15
Snakeman Navigator	54	20	18	16	12	0	42	2	3	17
Snakeman Engineer	54	20	18	16	12	0	42	2	4	20
Snakeman Leader	54	20	24	22	20	0	47	2	5	28
Snakeman Commander	54	26	26	22	20	0	52	2	6	36
Ethereal Soldier	85	35	35	35	35	42	52	1	6	20
Ethereal Leader	85	40	40	40	40	47	63	1	7	30
Ethereal Commander	85	45	45	45	45	52	68	1	8	40
Muton Soldier	78	20	20	20	10	0	26	2	2	15
Muton Navigator	78	24	24	24	15	0	26	2	3	17
Muton Engineer	78	28	28	28	20	0	26	2	4	19
Reaper	80	28	28	28	4	0	37	2	2	25
Chryssalid	80	34	34	34	34	0	52	2	4	25
Silacoid	80	50	50	50	10	0	84	2	3	20
Celatid	80	20	20	20	20	0	63	2	4	20
Sectopod	80	145	130	100	90	0	104	1	4	30
Cyberdisc	80	34	34	34	34	0	104	1	5	20
Zombie	80	4	4	4	4	0	84	2	3	18

Table 9-3 Alien Characteristics (Veteran Level) (Part A)

Alien/Rank	Flight	Height	TUs	Health	Stamina	React	Str	Brave	Firing Acc.	Throw Acc.
Floater Soldier	yes	21	54	35	98	54	44	80	54	58
Floater Navigator	yes	21	54	35	98	54	44	80	54	58
Floater Medic	yes	21	54	35	98	54	44	80	54	58
Floater Engineer	yes	21	54	35	98	54	44	80	54	58
Floater Leader	yes	21	60	40	103	65	51	80	65	58
Floater Commander	yes	21	65	45	108	72	52	80	68	65
Sectoid Soldier	no	16	59	30	98	68	33	80	57	58
Sectoid Navigator	no	16	59	30	98	68	33	80	57	58
Sectoid Medic	no	16	59	30	98	68	33	80	57	58
Sectoid Engineer	no	16	59	30	98	68	33	80	57	58
Sectoid Leader	no	16	59	30	98	68	33	80	57	58
Sectoid Commander	no	16	59	30	98	68	33	80	57	58
Snakeman Soldier	no	18	44	45	87	49	51	80	63	65
Snakeman Navigator	no	18	44	45	87	49	51	80	63	65
Snakeman Engineer	no	18	44	45	87	49	51	80	63	65
Snakeman Leader	no	18	44	45	87	60	51	80	71	65
Snakeman Commander	no	18	49	55	91	71	51	80	63	65
Ethereal Soldier	yes	20	74	55	104	81	52	80	80	80
Ethereal Leader	yes	20	74	55	104	81	52	80	80	80
Ethereal Commander	yes	20	74	55	104	81	52	80	80	80
Muton Soldier	no	21	61	125	98	65	76	80	59	62
Muton Navigator	no	21	61	125	98	65	76	80	59	62
Muton Engineer	no	21	61	125	98	65	76	80	59	62
Reaper	no	23	67	148	98	70	98	80	0	0
Chryssalid	no	21	119	96	152	76	119	100	0	0
Silacoid	no	10	44	114	87	44	76	100	0	0
Celatid	no	12	76	68	98	44	76	90	108	0
Sectopod	no	23	67	120	98	70	98	110	65	0
Cyberdisc	yes	15	67	120	98	70	98	110	65	0
Zombie	no	18	44	84	119	44	91	110	0	0

Table 9-3 Alien Characteristics (Veteran Level) (Part B)

Alien/Rank	Close Acc.	Front Arm.	L/R Arm.	Rear Arm.	Under Arm.	Psi Skill	Psi Str.	Agr.	Intel.	Vps
Floater Soldier	70	8	6	4	12	0	38	2	4	12
Floater Navigator	70	8	6	4	12	0	38	2	5	14
Floater Medic	70	8	6	4	12	0	38	1	6	16
Floater Engineer	70	8	6	4	12	0	38	1	6	18
Floater Leader	70	16	12	8	12	0	44	0	8	25
Floater Commander	70	24	18	12	16	0	49	0	8	35
Sectoid Soldier	76	4	3	2	2	0	44	2	3	10
Sectoid Navigator	76	4	3	2	2	0	44	2	4	12
Sectoid Medic	76	4	3	2	2	0	44	1	5	14
Sectoid Engineer	76	4	3	2	2	0	44	2	6	16
Sectoid Leader	76	4	3	2	2	54	54	1	7	20
Sectoid Commander	76	4	3	2	2	65	54	0	8	25
Snakeman Soldier	54	20	18	16	12	0	44	2	2	15
Snakeman Navigator	54	20	18	16	12	0	44	2	3	17
Snakeman Engineer	54	20	18	16	12	0	44	2	4	20
Snakeman Leader	54	20	24	22	20	0	49	2	5	28
Snakeman Commander	54	26	26	22	20	0	54	2	6	36
Ethereal Soldier	85	35	35	35	35	44	54	1	6	20
Ethereal Leader	85	40	40	40	40	49	65	1	7	30
Ethereal Commander	85	45	45	45	45	54	71	1	8	40
Muton Soldier	78	20	20	20	10	0	27	2	2	15
Muton Navigator	78	24	24	24	15	0	27	2	3	17
Muton Engineer	78	28	28	28	20	0	27	2	4	19
Reaper	80	28	28	28	4	0	38	2	2	25
Chryssalid	80	34	34	34	34	0	54	2	4	25
Silacoid	80	50	50	50	10	0	87	2	3	20
Celatid	80	20	20	20	20	0	65	2	4	20
Sectopod	80	145	130	100	90	0	108	1	4	30
Cyberdisc	80	34	34	34	34	0	108	1	5	20
Zombie	80	4	4	4	4	0	87	2	3	18

Table 9-4 Alien Characteristics (Genius Level) (Part A)

Alien/Rank	Flight	Height	TUs	Health	Stamina	React	Str	Brave	Firing Acc.	Throw Acc.
Floater Soldier	yes	21	56	35	101	56	45	80	56	58
Floater Navigator	yes	21	56	35	101	56	45	80	56	58
Floater Medic	yes	21	56	35	101	56	45	80	56	58
Floater Engineer	yes	21	56	35	101	56	45	80	56	58
Floater Leader	yes	21	62	40	107	68	53	80	68	58
Floater Commander	yes	21	68	45	112	74	54	80	71	65
Sectoid Soldier	no	16	61	30	101	74	34	80	59	58
Sectoid Navigator	no	16	61	30	101	74	34	80	59	58
Sectoid Medic	no	16	61	30	101	74	34	80	59	58
Sectoid Engineer	no	16	61	30	101	74	34	80	59	58
Sectoid Leader	no	16	61	30	101	74	34	80	59	58
Sectoid Commander	no	16	61	30	101	74	34	80	59	58
Snakeman Soldier	no	18	45	45	90	51	53	80	65	65
Snakeman Navigator	no	18	45	45	90	51	53	80	65	65
Snakeman Engineer	no	18	45	45	90	51	53	80	65	65
Snakeman Leader	no	18	45	45	90	62	53	80	73	65
Snakeman Commander	no	18	51	55	94	73	53	80	65	65
Ethereal Soldier	yes	20	77	55	108	84	54	80	83	80
Ethereal Leader	yes	20	77	55	108	84	54	80	83	80
Ethereal Commander	yes	20	77	55	108	84	54	80	83	80
Muton Soldier	no	21	63	125	101	68	79	80	61	62
Muton Navigator	no	21	63	125	101	68	79	80	61	62
Muton Engineer	no	21	63	125	101	68	79	80	61	62
Reaper	no	23	70	148	101	72	101	80	0	0
Chryssalid	no	21	124	96	157	79	124	100	0	0
Silacoid	no	10	45	114	90	45	79	100	0	0
Celatid	no	12	78	68	101	45	79	90	112	0
Sectopod	no	23	70	120	101	72	101	110	68	0
Cyberdisc	yes	15	70	120	101	72	101	110	68	0
Zombie	no	18	45	84	124	45	94	110	0	0

Table 9-4 Alien Characteristics (Genuis Level) (Part B)

Alien/Rank	Close Acc.	Front Arm.	L/R Arm.	Rear Arm.	Under Arm.	Psi Skill	Psi Str.	Agr.	Intel.	Vps
Floater Soldier	70	8	6	4	12	0	40	2	4	12
Floater Navigator	70	8	6	4	12	0	40	2	5	14
Floater Medic	70	8	6	4	12	0	40	1	6	16
Floater Engineer	70	8	6	4	12	0	40	1	6	18
Floater Leader	70	16	12	8	12	0	45	0	8	25
Floater Commander	70	24	18	12	16	0	51	0	8	35
Sectoid Soldier	76	4	3	2	2	0	45	2	3	10
Sectoid Navigator	76	4	3	2	2	0	45	2	4	12
Sectoid Medic	76	4	3	2	2	0	45	1	5	14
Sectoid Engineer	76	4	3	2	2	0	45	2	6	16
Sectoid Leader	76	4	3	2	2	56	56	1	7	20
Sectoid Commander	76	4	3	2	2	68	56	0	8	25
Snakeman Soldier	54	20	18	16	12	0	45	2	2	15
Snakeman Navigator	54	20	18	16	12	0	45	2	3	17
Snakeman Engineer	54	20	18	16	12	0	45	2	4	20
Snakeman Leader	54	20	24	22	20	0	51	2	5	28
Snakeman Commander	54	26	26	22	20	0	56	2	6	36
Ethereal Soldier	85	35	35	35	35	45	56	1	6	20
Ethereal Leader	85	40	40	40	40	51	68	1	7	30
Ethereal Commander	85	45	45	45	45	56	73	1	8	40
Muton Soldier	78	20	20	20	10	0	28	2	2	15
Muton Navigator	78	24	24	24	15	0	28	2	3	17
Muton Engineer	78	28	28	28	20	0	28	2	4	19
Reaper	80	28	28	28	4	0	40	2	2	25
Chryssalid	80	34	34	34	34	0	56	2	4	25
Silacoid	80	50	50	50	10	0	90	2	3	20
Celatid	80	20	20	20	20	0	68	2	4	20
Sectopod	80	145	130	100	90	0	112	1	4	30
Cyberdisc	80	34	34	34	34	0	112	1	5	20
Zombie	80	4	4	4	4	0	90	2	3	18

Table 9-5 Alien Characteristics (Superhuman Level) (Part A)

Alien/Rank	Flight	Height	TUs	Health	Stamina	React	Str	Brave	Firing Acc.	Throw Acc.
Floater Soldier	yes	21	58	35	105	58	47	80	58	58
Floater Navigator	yes	21	58	35	105	58	47	80	58	58
Floater Medic	yes	21	58	35	105	58	47	80	58	58
Floater Engineer	yes	21	58	35	105	58	47	80	58	58
Floater Leader	yes	21	64	40	111	70	55	80	70	58
Floater Commander	yes	21	70	45	116	77	56	80	73	65
Sectoid Soldier	no	16	63	30	105	74	35	80	61	58
Sectoid Navigator	no	16	63	30	105	74	35	80	61	58
Sectoid Medic	no	16	63	30	105	74	35	80	61	58
Sectoid Engineer	no	16	63	30	105	74	35	80	61	58
Sectoid Leader	no	16	63	30	105	74	35	80	61	58
Sectoid Commander	no	16	63	30	105	74	35	80	61	58
Snakeman Soldier	no	18	47	45	93	53	55	80	68	65
Snakeman Navigator	no	18	47	45	93	53	55	80	68	65
Snakeman Engineer	no	18	47	45	93	53	55	80	68	65
Snakeman Leader	no	18	47	45	93	64	55	80	76	65
Snakeman Commander	no	18	53	55	98	76	55	80	68	65
Ethereal Soldier	yes	20	79	55	112	87	56	80	86	80
Ethereal Leader	yes	20	79	55	112	87	56	80	86	80
Ethereal Commander	yes	20	79	55	112	87	56	80	86	80
Muton Soldier	no	21	65	125	105	70	82	80	63	62
Muton Navigator	no	21	65	125	105	70	82	80	63	62
Muton Engineer	no	21	65	125	105	70	82	80	63	62
Reaper	no	23	72	148	105	75	105	80	0	0
Chryssalid	no	21	124	96	163	82	128	100	0	0
Silacoid	no	10	47	114	93	47	82	100	0	0
Celatid	no	12	82	68	105	47	82	90	116	0
Sectopod	no	23	72	120	105	75	105	110	70	0
Cyberdisc	yes	15	72	120	105	75	105	110	70	0
Zombie	no	18	47	84	128	47	98	110	0	0

Table 9-5 Alien Characteristics (Superman Level) (Part B)

Alien/Rank	Close Acc.	Front Arm.	L/R Arm.	Rear Arm.	Under Arm.	Psi Skill	Psi Str.	Agr.	Intel.	Vps
Floater Soldier	70	8	6	4	12	0	41	2	4	12
Floater Navigator	70	8	6	4	12	0	41	2	5	14
Floater Medic	70	8	6	4	12	0	41	1	6	16
Floater Engineer	70	8	6	4	12	0	41	1	6	18
Floater Leader	70	16	12	8	12	0	47	0	8	25
Floater Commander	70	24	18	12	16	0	53	0	8	35
Sectoid Soldier	76	4	3	2	2	0	47	2	3	10
Sectoid Navigator	76	4	3	2	2	0	47	2	4	12
Sectoid Medic	76	4	3	2	2	0	47	1	5	14
Sectoid Engineer	76	4	3	2	2	0	47	2	6	16
Sectoid Leader	76	4	3	2	2	58	58	1	7	20
Sectoid Commander	76	4	3	2	2	70	58	0	8	25
Snakeman Soldier	54	20	18	16	12	0	47	2	2	15
Snakeman Navigator	54	20	18	16	12	0	47	2	3	17
Snakeman Engineer	54	20	18	16	12	0	47	2	4	20
Snakeman Leader	54	20	24	22	20	0	53	2	5	28
Snakeman Commander	54	26	26	22	20	0	58	2	6	36
Ethereal Soldier	85	35	35	35	35	47	58	1	6	20
Ethereal Leader	85	40	40	40	40	53	70	1	7	30
Ethereal Commander	85	45	45	45	45	58	76	1	8	40
Muton Soldier	78	20	20	20	10	0	29	2	2	15
Muton Navigator	78	24	24	24	15	0	29	2	3	17
Muton Engineer	78	28	28	28	20	0	29	2	4	19
Reaper	80	28	28	28	4	0	41	2	2	25
Chryssalid	80	34	34	34	34	0	58	2	4	25
Silacoid	80	50	50	50	10	0	93	2	3	20
Celatid	80	20	20	20	20	0	70	2	4	20
Sectopod	80	145	130	100	90	0	116	1	4	30
Cyberdisc	80	34	34	34	34	0	116	1	5	20
Zombie	80	4	4	4	4	0	93	2	3	18

(Cont. from page 249)

Str. (Strength): For the Reaper, Chryssalid, Silacoid, and Zombie, this number is the alien's close combat value and is treated in the same way as the base accuracy value of a weapon. In all other cases, strength determines how far objects may be thrown by the alien.

Brave (Bravery): As with X-COM soldiers, this characteristic determines the alien's likelihood to panic or go berserk in an unpleasant situation. The lower this characteristic drops, the more likely it is that the alien will panic.

Firing Acc. (Firing Accuracy): The alien's base accuracy for firing a ranged weapon.

Throw Acc. (Throwing Accuracy): The alien's base accuracy for thrown weapons.

Close Acc. (Close Combat base accuracy): This characteristic applies only to aliens that are unable to use ranged weapons (Reaper, Chryssalid, Silacoid, and Zombie).

Armor: The alien's armor value. This number is broken down by direction as follows: front, Left/Right (L/R), Rear, and Under.

Psi Skill (Psionic Skill): The alien's base ability level in using psionics. If this rating is greater than 0, the alien can perform psionic attacks.

Psi Str. (Psionic Strength): The alien's base ability to resist psionic attacks.

Agr. (Aggression): A rating of the alien's level of aggressiveness, ranked from 0 to 2, with 2 the most aggressive. The more aggressive the alien, the more likely that it will stand and attack an X-COM soldier rather than attempt to take cover.

Intel.: A ranking of the alien's level of intelligence, rated from 2 through 8, with 8 the most intelligent. This number affects the alien's knowledge of where X-COM units are. After a spotted X-COM unit goes back into cover, the soldier remains spotted by the alien for a number of turns equal to the alien's intelligence. After this period is over and the soldier has remained unspotted, the alien no longer knows the soldier's position.

VPs: The number of victory points received if the alien is killed by an X-COM soldier.

ALIEN ATTACKS

Just as each alien has its own personality and physical characteristics, most aliens also have their own attack methods. While many of the aliens use plasma and explosive weapons, there are several alien species have special attacks which only they are capable of utilizing.

PHYSICAL ATTACKS

Most aliens you encounter in the game use conventional methods of attack. That is, they use thrown and ranged weapons during combat. The weaponry used by the aliens is described in detail in Chapter 4, "X-COM Hardware," along with all other weapons and equipment.

Some alien types do not use conventional weapons during combat. As noted in their individual descriptions, the Reaper, Chryssalid, Silacoid, and Zombie do not use weapons: They attack using close combat: either biting their victims or fighting them hand to hand. The Celatid attacks at a distance, by using projecting streams of acid spit.

The two mechanical aliens, the Cyberdisc and Sectopod, use modified versions of conventional weapons that are integrated into their systems. They are roughly equivalent to X-COM HWPs in their function. The Cyberdisc fires a plasma beam, and the Sectopod fires a powerful energy beam.

Table 9-6 lists the weapons or attack methods used by the aliens and shows their base accuracy, time-unit cost, and the amount of damage they can inflict.

PSIONIC ATTACKS

Some members of both the Sectoid and Ethereal races are capable of attacking X-COM soldiers through the use of psionics. In fact, aliens with psionic attack capability usually prefer this method of attack over attacks with physical weapons. The reason is probably that a psionic attack has two distinct advantages: First, it can be launched from a great distance and does not require the soldier to

Table 9-6 Statistics for Alien Built-in Weapons and Close Combat Attacks

Attack Type	Damage	Accuracy			Time Units to Fire			Close Combat Accur.
		Auto	Snap	Aimed	Auto	Snap	Aimed	
Celatid Acid Spit	140	—	75%	110%	—	30%	60%	—
Cyberdisc Plasma Beam	130	—	75%	110%	—	30%	60%	—
Sectopod Energy Beam	100	50%	75%	110%	35%	30%	60%	—
Silacoid Close Combat	70	—	—	—	—	—	—	80%
Chryssalid Close Combat	110	—	—	—	—	—	—	80%
Reaper Close Combat	90	—	—	—	—	—	—	80%
Zombie Close Combat	84	—	—	—	—	—	—	80%

be visible to the attacking alien. An alien can therefore attack from inside a closed room, leaving you without a clue to the alien's location. Second, psionic attacks can do more than just incapacitate: They can turn the attack victim against his or her comrades when the soldier is successfully under alien control. As long as the soldier remains under alien control, the aliens essentially have one more member on their team.

Psionic attacks are not affected by the victim's armor. The only factor that can defend against a psionic attack is the victim's psionic strength. This characteristic is revealed only after a soldier has been trained at a psi-lab facility for at least a month. It is wise to take into battle only soldiers with high psionic strength when you know that you will be fighting a race of aliens that possess psionic capability.

The principles and statistics governing psionic combat are covered in detail in Chapter 5, "Finance."

Chapter Ten

GROUND ASSAULTS

In X-COM: UFO Defense, your fleet of interceptors performs the task of knocking as many UFOs as possible out of the sky. But that's only the beginning. After the UFO is on the ground, it's time to send in the troops. Your interceptors usually can't put an end to all UFO activity in the world; some are bound to slip through undetected, of course. These UFOs pose other problems, which also must be solved by sending in a squadron of soldiers and ground assault equipment. Successful completion of ground missions is one of the major factors involved when a country is judging X-COM's performance in its territory. But there is more to the ground assault portion of the game than just killing aliens to please funding nations.

Ground assaults are the launching point for nearly every advanced research topic in the game. All materials required for the research of alien technology, whether it happens to be weapons technology or information about alien origins, are acquired by your soldiers when they successfully complete ground assaults. In addition, alien material and artifacts recovered from ground assaults add usable equipment to your cache of supplies. In fact, Elerium-115, the alien element that provides power for most alien weapons and all alien craft, cannot be found or produced on Earth: It must be recovered by your soldiers at the site of a ground assault. These factors make it vital that you successfully complete as many ground assaults as possible.

Ground assaults come in several varieties:

- UFO crash sites: The investigation of a UFO shot down by an X-COM interceptor
- UFO assaults: Sending soldiers to the landing site of an undamaged UFO to subdue its inhabitants before they can cause harm elsewhere
- Alien base assaults: Sending soldiers into an alien base to subdue the occupants and shut down the base
- Terror missions: Sending troops to intervene at the site of an alien terror raid
- X-COM base defense: Defending an X-COM base invaded by alien forces

Each type of ground assault and its associated tactics are covered in this chapter.

The chapter begins with the generalities: preparation, the turn system, the rules of movement, etc. Then it moves on to descriptions of each type of ground assault and the strategies involved.

PREPARATION

One of the first things you should do when you start a new game is to prepare for your first ground assault mission. You have to assign all the necessary troops and equipment to the Skyranger so that you are ready to fly as soon as you shoot down your first UFO.

When the game begins, all eight original soldiers are already assigned to Skyranger-1, along with a rudimentary cache of weapons and ammunition. To see what's aboard, click the Equip Craft option on the Bases screen, and then click Skyranger-1. This step brings up the Equip Craft screen for Skyranger-1, as shown in Figure 10-1.

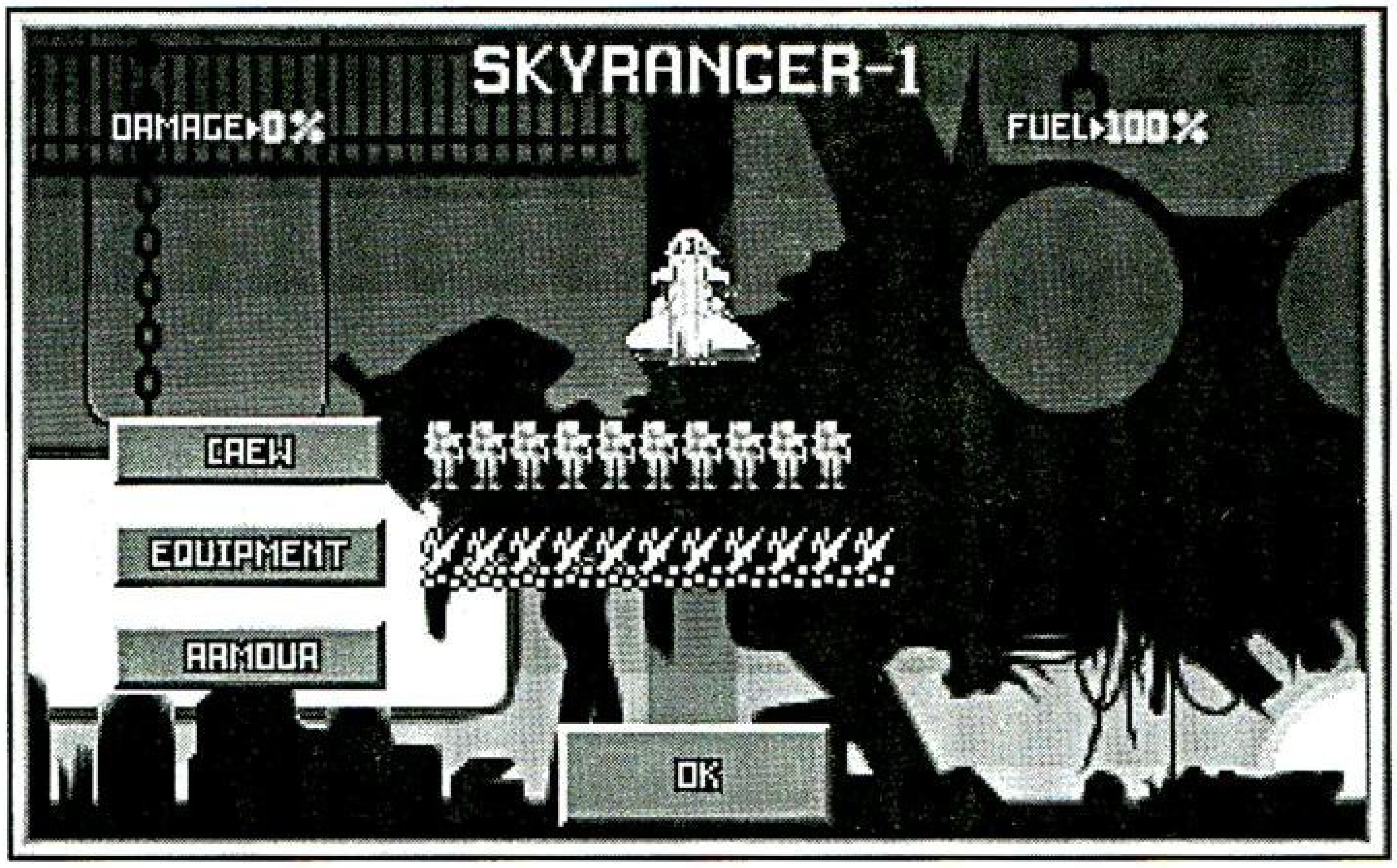
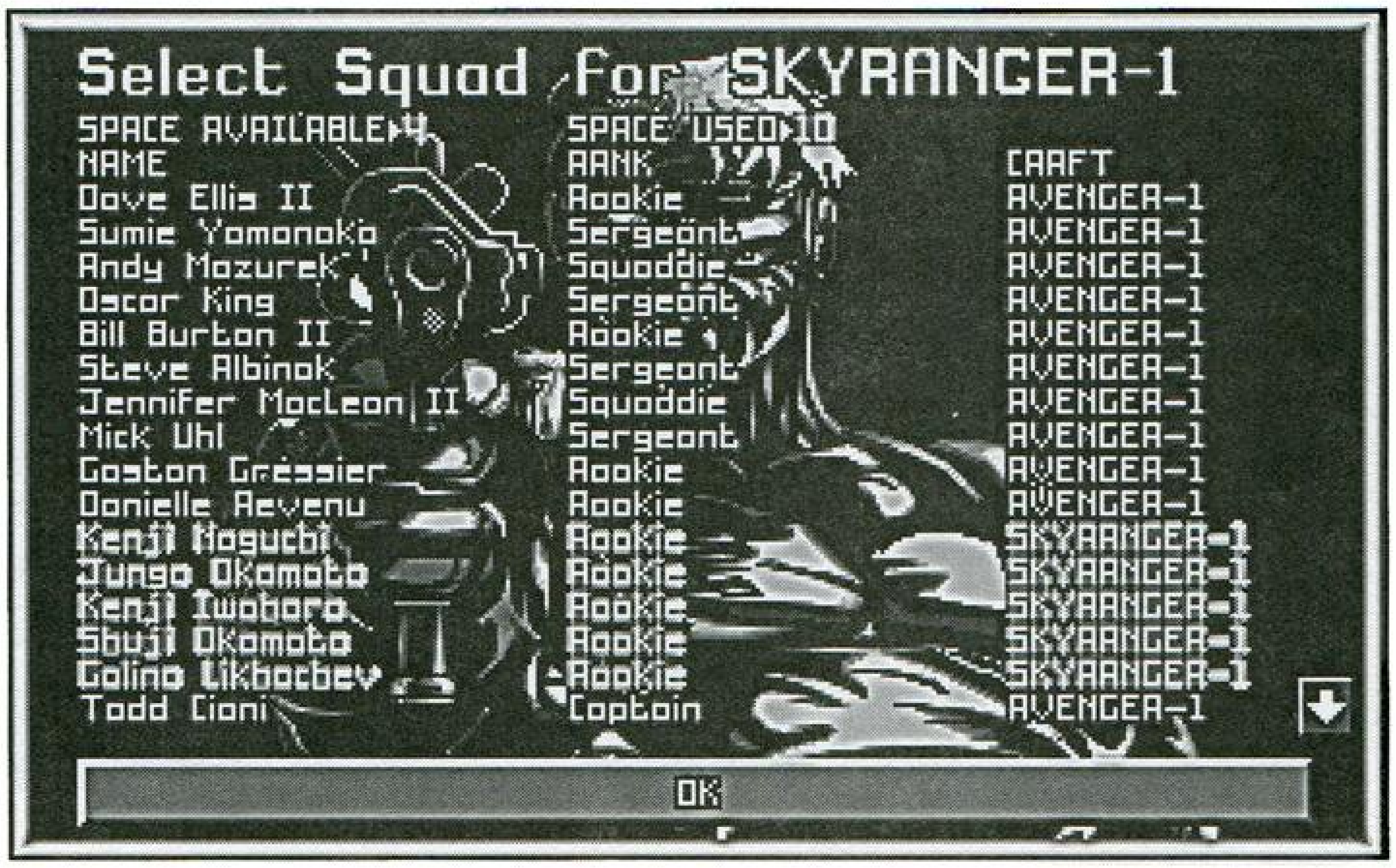


Figure 10-1
The Equip Craft screen for a Skyranger.

This screen differs slightly from the Equip Craft screen for intercept craft. First, the Skyranger has no weapon pods, so it cannot mount air-to-air weaponry. It is the only craft in the game, in fact, that is incapable of air-to-air combat. Second, control buttons labeled Crew, Equipment, and Armor enable you to load soldiers and weaponry into the cargo hold of the craft and assign armor to each soldier.

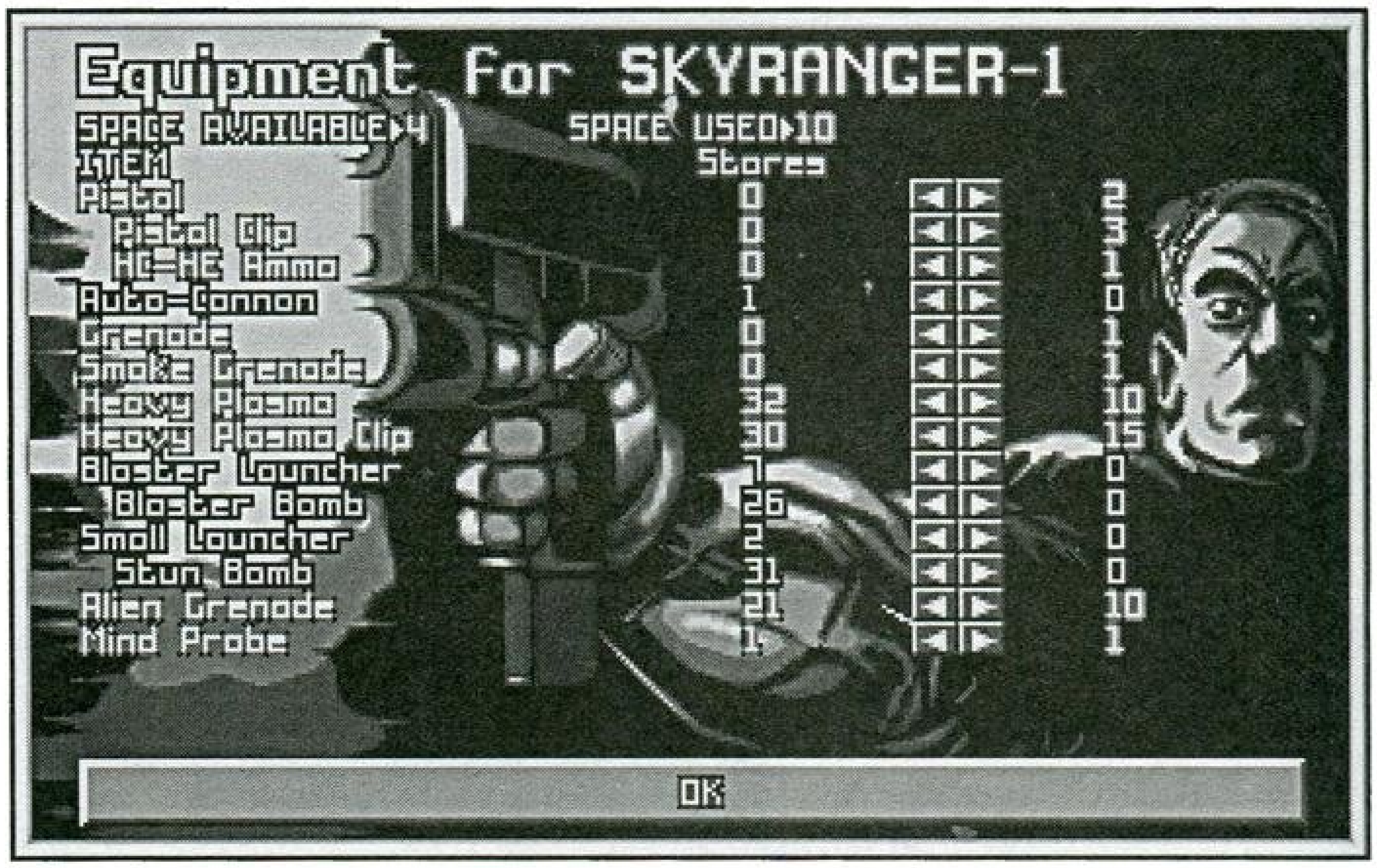
To assign soldiers to duty aboard the Skyranger (or other transport craft), click the Crew button. This step brings up the Select Squad screen, as shown in Figure 10-2.


Select Squad for SKYRANGER-1

SPACE AVAILABLE▸4
SPACE USED▸10

NAME	RANK	CRAFT
Dave Ellis II	Rookie	AVENGER-1
Sumie Yamanaka	Sergeant	AVENGER-1
Andy Mazurek	Squaddie	AVENGER-1
Oscar King	Sergeant	AVENGER-1
Bill Burton II	Rookie	AVENGER-1
Steve Albinak	Sergeant	AVENGER-1
Jennifer Macleon II	Squaddie	AVENGER-1
Mick Uhl	Sergeant	AVENGER-1
Gaston Gréssier	Rookie	AVENGER-1
Danielle Revenu	Rookie	AVENGER-1
Kenji Noguchi	Rookie	SKYRANGER-1
Jungo Okamoto	Rookie	SKYRANGER-1
Kenji Iwahara	Rookie	SKYRANGER-1
Shuji Okamoto	Rookie	SKYRANGER-1
Galina Likhachev	Rookie	SKYRANGER-1
Todd Cioni	Captain	AVENGER-1

Figure 10-2
The Select Squad screen.



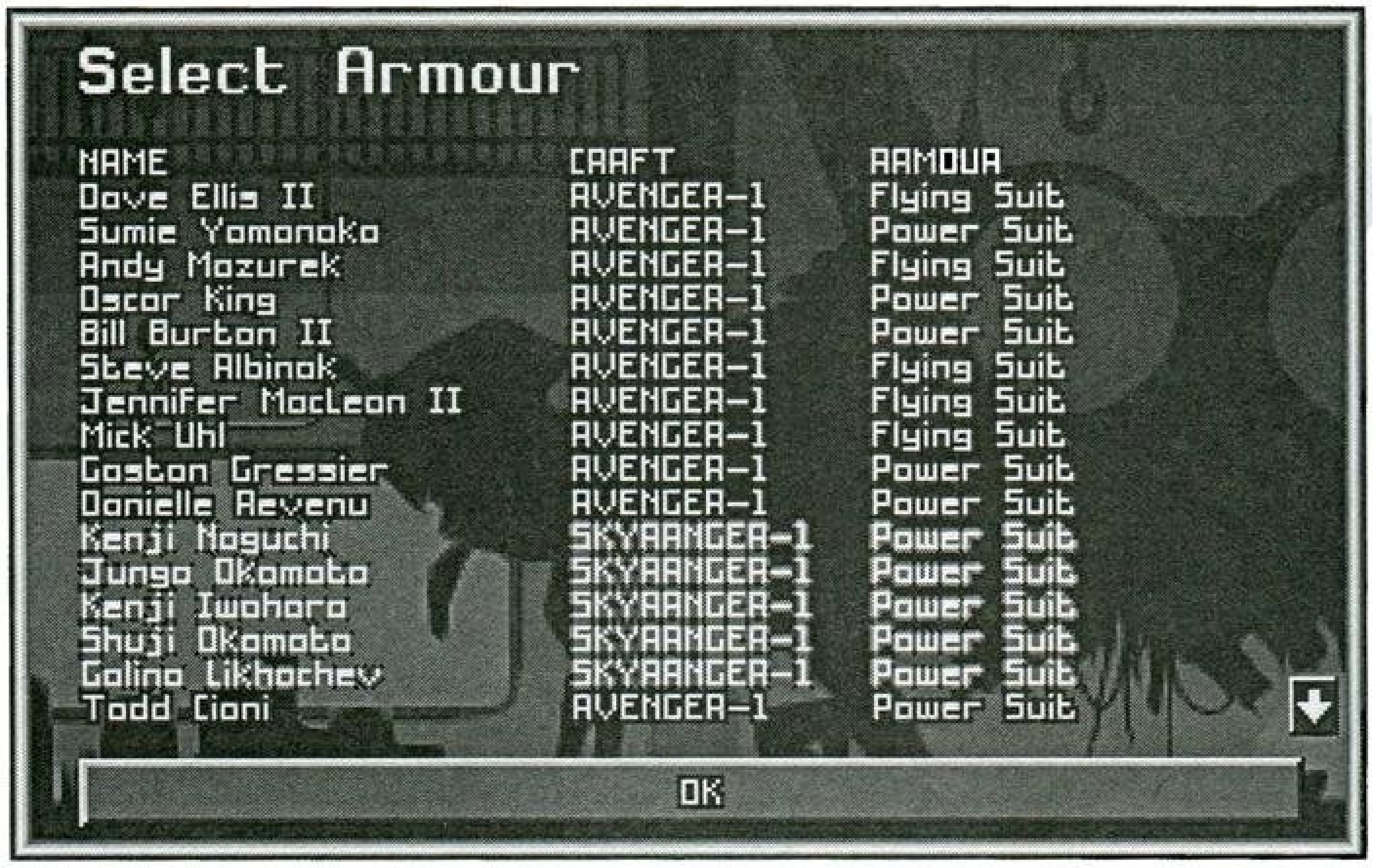
Equipment for SKYRANGER-1

SPACE AVAILABLE▸4 SPACE USED▸10

ITEM	Stores		
Pistol	0	◀ ▶	2
Pistol Clip	0	◀ ▶	3
HC-HE Ammo	0	◀ ▶	1
Auto-Cannon	1	◀ ▶	0
Grenade	0	◀ ▶	1
Smoke Grenade	0	◀ ▶	1
Heavy Plasma	32	◀ ▶	10
Heavy Plasma Clip	30	◀ ▶	15
Blaster Launcher	7	◀ ▶	0
Blaster Bomb	26	◀ ▶	0
Small Launcher	2	◀ ▶	0
Stun Bomb	31	◀ ▶	0
Alien Grenade	21	◀ ▶	10
Mind Probe	1	◀ ▶	1

Figure 10-3
The Select
Equipment screen.

This screen lists the name of the craft at the top, with its Space Available and Space Used listed directly below. Underneath that information is a roster of the soldiers stationed at the base where the transport craft is docked, along with their rank and current craft assignment. To assign a soldier to the transport craft, click on the soldier's name. When you are finished choosing the squad, click the OK button.



Select Armour

NAME	CRAFT	ARMOUR
Dave Ellis II	AVENGER-1	Flying Suit
Sumie Yamanaka	AVENGER-1	Power Suit
Andy Mazurek	AVENGER-1	Flying Suit
Oscar King	AVENGER-1	Power Suit
Bill Burton II	AVENGER-1	Power Suit
Steve Albinak	AVENGER-1	Flying Suit
Jennifer Maclean II	AVENGER-1	Flying Suit
Mick Uhl	AVENGER-1	Flying Suit
Gaston Gressier	AVENGER-1	Power Suit
Danielle Revenu	AVENGER-1	Power Suit
Kenji Noguchi	SKYRANGER-1	Power Suit
Junga Okamoto	SKYRANGER-1	Power Suit
Kenji Iwahara	SKYRANGER-1	Power Suit
Shuji Okamoto	SKYRANGER-1	Power Suit
Galina Likhachev	SKYRANGER-1	Power Suit
Todd Cioni	AVENGER-1	Power Suit

Figure 10-4
The Select
Armor screen.

To load weapons and equipment into the hold of the craft, click the Equipment button. This step brings up the Select Equipment screen, as shown in Figure 10-3.

As on the Select Squad screen, this screen lists the name of the craft at the top, along with the Space Available and Space Used statistics. Beneath this information is a listing of all equipment, weapons, ammunition, and HWPs at the base where the craft is docked. The Stores column shows the number of each item available at the base. The far right column shows the number of each item already stored aboard the transport craft. If no units of a given item are aboard the craft, the item is highlighted in purple. Items with at least one unit already aboard the craft are listed in blue.

To load an item on the transport craft, click the right arrow on that item's line one time for each unit you want to load on the craft. To unload items from the craft, click the left arrow. When you finish loading the craft, click the OK button.

To choose armor for your crew, click the Armor button. This step displays the Select Armor screen, as shown in Figure 10-4.

This screen shows the names of all soldiers assigned to the craft, the name of the craft they are assigned to, and the type of armor they are wearing. To choose the type of armor for each soldier, click on a soldier's name. This step brings up the Select Armor Type window, as shown in Figure 10-5.

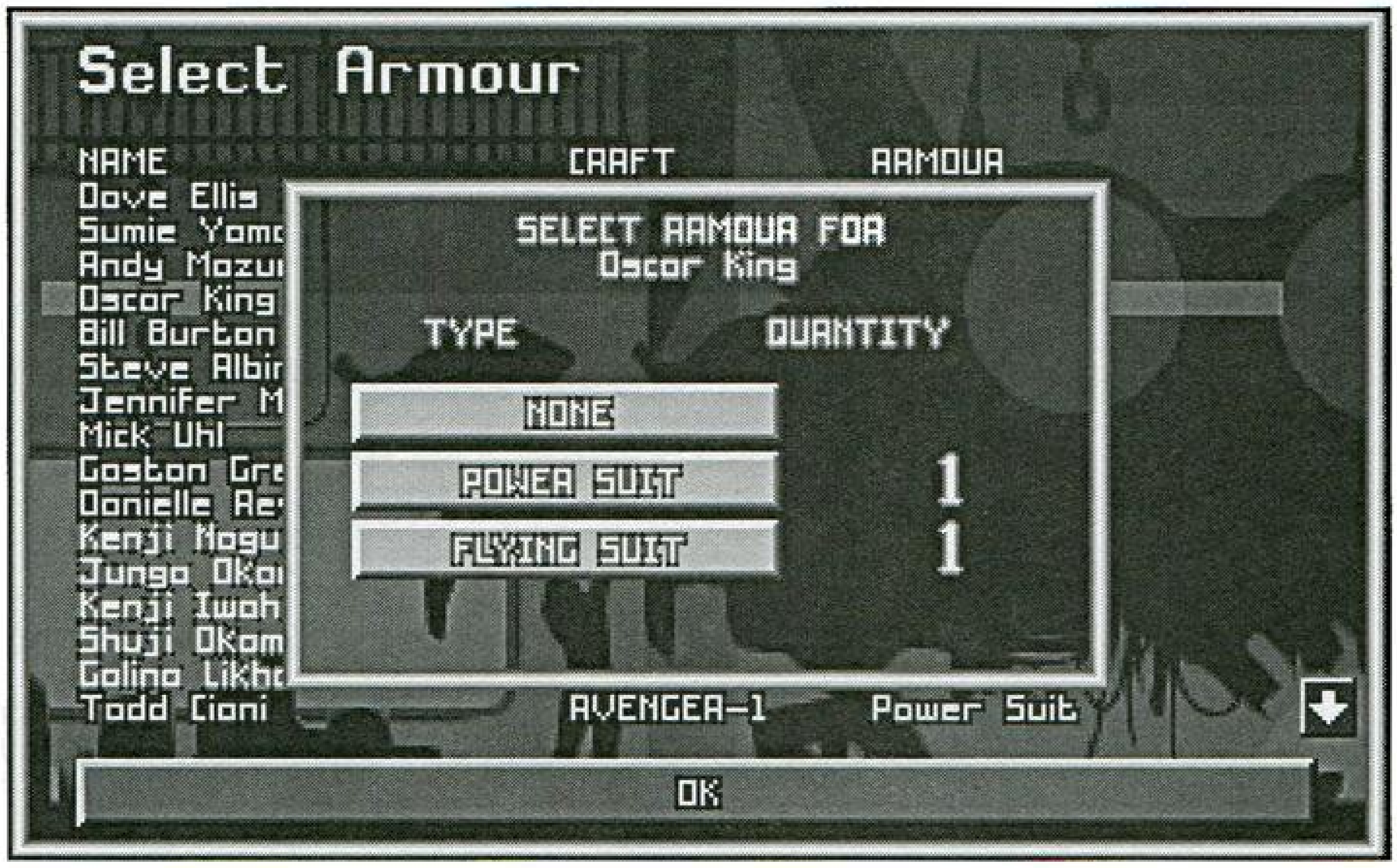

Select Armour
NAME
CRAFT
ARMOUR
Dave Ellis
Sumie Yamc
Andy Mazui
Oscar King
Bill Burton
Steve Albir
Jennifer M
Mick Uhl
Gaston Gre
Danielle Re
Kenji Nogu
Jungo Okai
Kenji Iwah
Shuji OKam
Galina Likhc
Todd Cioni
AVENGER-1
Power Suit
SELECT ARMOUR FOR
Oscar King
TYPE
QUANTITY
NONE
POWER SUIT
1
FLYING SUIT
1
OK

Figure 10-5. The Select Armor Type window.

This windows lists all available types of armor and the number of each type in storage. Choose an armor type by clicking on its button. When you do, you return to the Select Armor screen, and the soldier is equipped with the chosen type of armor.

Armor being worn by another soldier is not listed in the Select Armor Type window. Armor can be transferred from one soldier to another, but it first must be removed from the person wearing it. To do so, click the name of the soldier on the Select Armor screen. When the Select Armor Type window appears, click None. You then return to the Select Armor screen, the chosen soldier has no armor, and the armor she had been wearing is automatically added to the list of stored armor.

PACKING ADVICE

There is limited space in which to carry people and items on any transport craft. The amount of space available for soldiers and HWPs is represented by the Space Available and Space Used figures on the Select Squad and Select Equipment screens. Each soldier takes up one unit of space. Each HWP takes up four units of space.

Cargo such as weapons, ammunition, and other equipment is stored separately, outside the crew compartment. Space for cargo is limited to 80 items, regardless of size. This is true on every type of transport craft. HWPs are counted as one unit of cargo apiece, in addition to taking up four spaces apiece in the crew compartment. Because armor is worn by the soldiers, it is not counted as part of the cargo.

Although 80 items may seem like a great deal of equipment, you may quickly find that space is at a premium unless you pack wisely. It is very easy, for example, to forget about the rifles and pistols stored in Skyranger-1 at the beginning of the game. As you upgrade to better weapons, you likely will eagerly add them to the arsenal in the transport craft, without even thinking about the obsolete weapons that are still in there, taking up space. As you upgrade to new weapons, be sure to remove the old ones and either sell them or transfer them to another base that might have just been established and is short on weaponry. It can be a nuisance to dig through the cargo hold every time you want to put something new on the ship. Also, be sure to remove ammunition clips for these obsolete weapons from the craft.

And speaking of ammunition, be sensible when you're storing ammo clips on transport craft. As long as you have enough clips in the general-stores modules of your base, all the weapons on board the transport craft automatically have their old clips replaced with brand-new ones at the end of a mission. In other words, the guns on your transport craft are already loaded for you. When you add this consideration to the fact that most weapons carry enough shots that a reasonably accurate soldier seldom goes through even one entire clip, it seems silly to carry around two or three spare clips for every weapon on board. One spare clip per weapon (with the possible exception of the heavy cannon) is more than sufficient in case of emergency. This technique saves you a great deal of space and saves room for powerful weapons such as the rocket launcher and the blaster launcher, whose ammunition takes up one unit of cargo space for every shot.

A good ground assault load-out for an early mission is shown in this list:

- 6 soldiers
- 4 rifles
- 4 spare rifle clips
- 1 heavy cannon (loaded with HE rounds)
- 2 spare heavy cannon HE clips (HC HE ammo)
- 1 auto-cannon (loaded with HE rounds)
- 2 auto-cannon HE clips (AC HE ammo)
- 2 HWPs (tank/rocket launchers)
- 8 grenades
- 8 proximity grenades
- 6 electro-flares

This load-out takes up 38 units of cargo space, less than half the space available. Other items that may be included are several smoke grenades and a few pistols (as backup weapons, in case someone runs out of ammunition or panics and drops his primary weapon). Other items you should include as soon as they're available are at least one medi-kit and a motion scanner.

The best way not to run out of cargo space in a transport is simply to be diligent in weeding out old, useless, obsolete equipment.

Although it is not specifically mentioned anywhere in the game documentation, there is (evidently) a third, separate cargo hold aboard every X-COM transport. In this hold, all alien captives, corpses, and artifacts are stored for transport from the site of each ground assault back to the X-COM base. No matter how full your transport craft is, all recovered aliens and their associated objects automatically appear in your general-stores modules at the base. You do not have to worry about saving room for the items you retrieve from ground assaults.

LAUNCH TIME

With your equipment and soldiers in place, you are ready to launch your troops into action as soon as the first opportunity comes along. You can take off for a ground assault mission whenever you want. You might want to use a little strategy, however, when you're deciding when to land at the ground assault location.

It is much more difficult to fight a ground assault at night than it is during the day. Your soldiers cannot see nearly as far, and the aliens use the shadows as hiding places, which greatly increases their advantage over your soldiers. In addition, aliens can see as effectively at night as they can during the day. Using electro-flares to light the landscape helps, but nothing beats broad daylight for lighting up the Battlescape.

Timing the landing of your transport craft is critical if you want to ensure a daytime ground assault. The easiest way to control the timing of the assault is to have your transport craft hover above the ground assault site until it is daytime. Send the transport to a waypoint near the ground assault area. When the craft reaches the waypoint, it begins patrolling the area. Switch the game-time setting to 5 minutes, and wait until the area around the ground assault site is in daylight, by watching the sunlight terminator (the line between light and dark). To be certain that the area is completely lit, wait until all shadows have passed away from the site.

Be careful not to wait too long: Most ground assault sites disappear after a certain amount of time. Although each case is slightly different, the following list shows the typical amount of time each type of ground assault site remains on the map:

UFO crash sites: 1 to 4 days
UFO landing sites: 4 to 12 hours (highly variable)
Terror sites: 4 to 10 hours

Defense of X-COM bases is immediate—they do not appear on the map as ground assault sites. Both the defense of X-COM bases and attacks on alien bases take place entirely inside anyway, so day and night make no difference.

Waiting for daylight is the best tactic for UFO recovery missions. The crash site remains long enough that you can pick your landing time at your leisure. When you assault a UFO landing site or deal with a terror mission, every hour you wait is taking a chance that your landing craft won't get to the site in time. In these cases, check to see how close sunrise is and take your chances accordingly.

Unless it's almost sunrise, the best bet is to land your transport immediately after you detect a terror site or a UFO on the ground. Allowing a landed UFO to complete its mission gives the aliens 30 to 50 points (depending on the UFO's mission). Not responding to a terror mission gives the aliens 1,000 points. Don't risk a poor monthly rating just because you were sitting around, waiting for the sun to come up.

ARRIVING AT THE GROUND ASSAULT SITE

When your transport craft reaches the site of a ground assault, a message appears, asking whether you are ready to land. Click OK if you are ready. If you click Cancel, the transport turns around and flies back to the base.

The first screen to appear after the transport has landed is the Equip Squad screen, as shown in Figure 10-6.

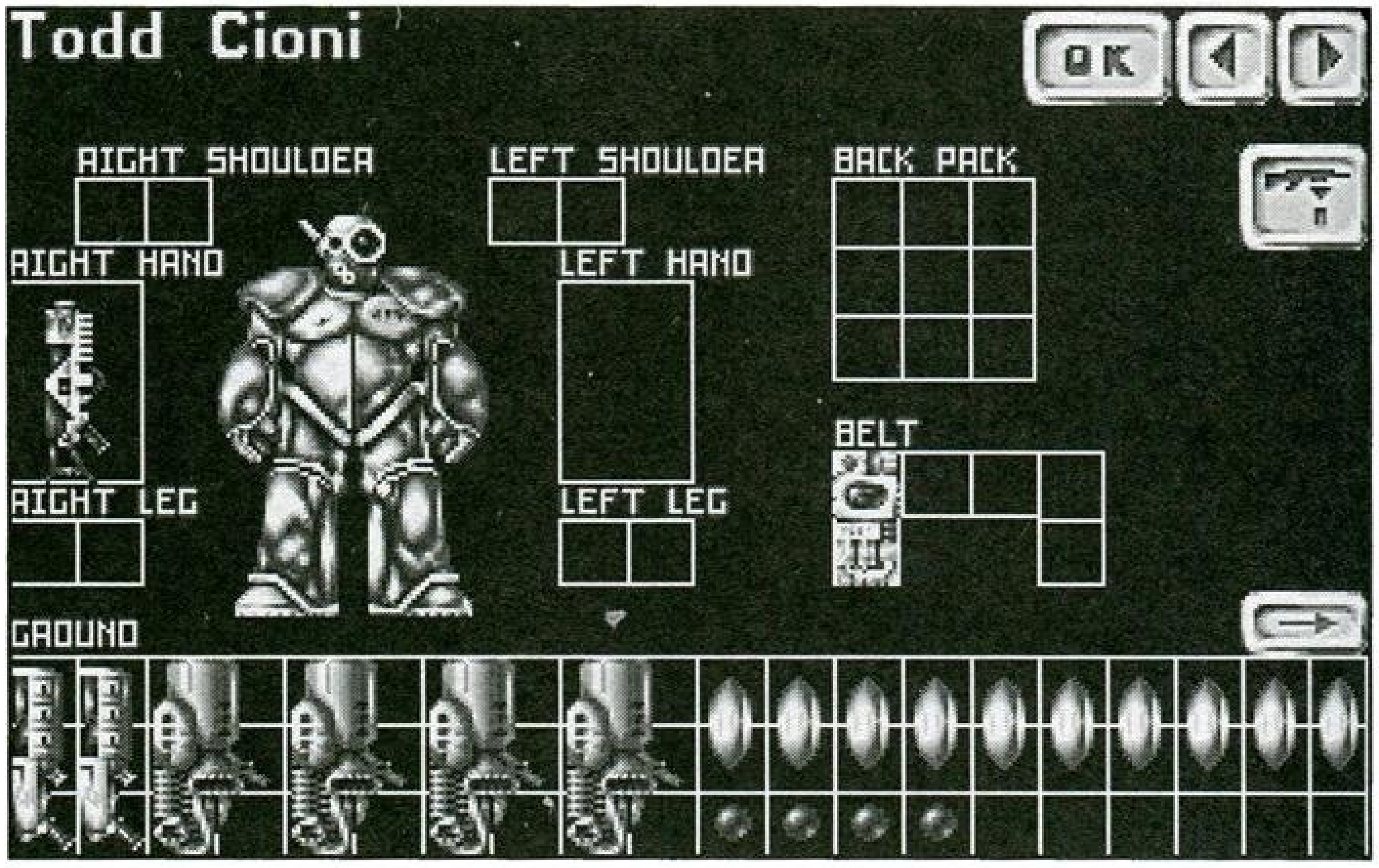


Figure 10-6
The Equip Squad screen.

This screen shows one of your soldiers dressed in his chosen armor. Unarmored soldiers are dressed in tan fatigues. At the top of the screen is the soldier's name. To the right of the name are left- and right-arrow buttons that enable you to scroll back and forth between all the soldiers on the transport. Each soldier is automatically armed and equipped with items that have been stored aboard the craft.

The boxes around the soldier's picture represent places where equipment can be carried. Different equipment requires different amounts of space. Each carrying area is labeled. Along the bottom of the screen are pictures of all the equipment loaded aboard the transport that is not already in someone's possession. If there are too many items on the transport to be displayed on one screen, click the right-arrow button directly above the storage area to scroll to a new screen.

These items may be picked up and placed in one of the storage areas on the soldier by clicking the object and dragging it to the desired storage position. As explained in Chapter 8, "Soldiers, Movement, and Combat", it takes more time to retrieve items from some storage positions than others. To remove an item from the soldier's possession, click the item and drag it to an empty space in the storage area. While you are dragging the object, its name appears below the soldier's name, and (if the item is a ranged weapon that uses ammunition) a box appears in the lower right corner, showing how much ammunition (if any) is loaded in the chosen item.

The button below the right and left arrows is the Unload button. To remove ammunition from a weapon, make sure that both the soldier's hands are empty. Click the weapon you want to unload, drag it onto the Unload button, and click again. The empty weapon appears in the soldier's right hand, and the ammunition appears in her left hand. To reload a weapon, place the weapon in one of the soldier's hands. Click on the proper type of ammunition and drag it onto the weapon. You hear a click as the ammunition snaps into place.

Each of your soldiers may be equipped by scrolling through them with the right- and left-arrow buttons in the top right corner of the screen. You should scroll through all the soldiers to check on the weapons the computer has chosen for them. Often, the computer's choices do not take full advantage of individual soldier abilities. A poor marksman may be given a laser rifle, for example, which requires good firing accuracy in order to be fully effective. Or a soldier with low strength may be weighted down with a heavy cannon and so many clips of HC ammo that she may not be able to move effectively. As shown in Chapter 8, "Soldiers, Movement, and Combat", a soldier may carry as much as her strength in item weight before receiving movement penalties.

After all your soldiers have been equipped to your satisfaction, you are ready to leave the transport and enter the battlefield.

SAVE THE GAME!

If ever there was a good time to save your game, now is the time. When your first turn begins, don't move any units! Click the ? button on the Battlescape control bar, and choose Save Game. Follow the save instructions described in Chapter 2, "The Geoscape Screen," and in the game manual.

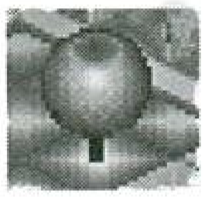
The main advantage of saving now is that, if things begin to go wrong during the ground assault, you can always restart the assault at the beginning. To do so, click the Dust Off button. When you are returned to the Geoscape, choose Load Game under the Options menu and reload your saved game. Now you're ready to start over.

One wonderful aspect of the game is that all alien forces always start in the same position when you reload a save. Therefore, if you played through part of the ground assault but began to lose, you can restart the same mission, already armed with knowledge of where the aliens are hiding.

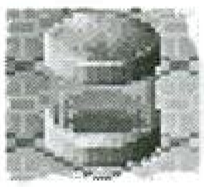
IDENTIFYING OBJECTS ON THE BATTLESCAPE

When you're outdoors, it is easy to identify the various objects, buildings, and obstructions. Inside a UFO or an alien base, however, many objects are not easily identified. It is important to know the function of this equipment; destroying it by accidentally shooting it often results in the loss of a valuable resource. Sometimes, it also results in a dangerous explosion.

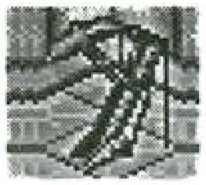
This section has illustrations of the objects commonly found inside UFOs and alien bases, along with a brief description of each.



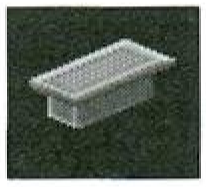
Alien entertainment: A recreational device used by the aliens



Alien food: A container for the processing and storage of food

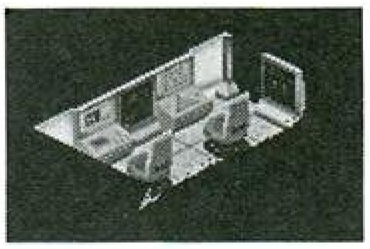


Alien surgery: Medical equipment and surgical lasers



Examination table: Used for genetic study and experiments

UFO navigation: Monitoring and navigational equipment



UFO power source: A small, highly explosive reactor containing 50 units of Elerium-115

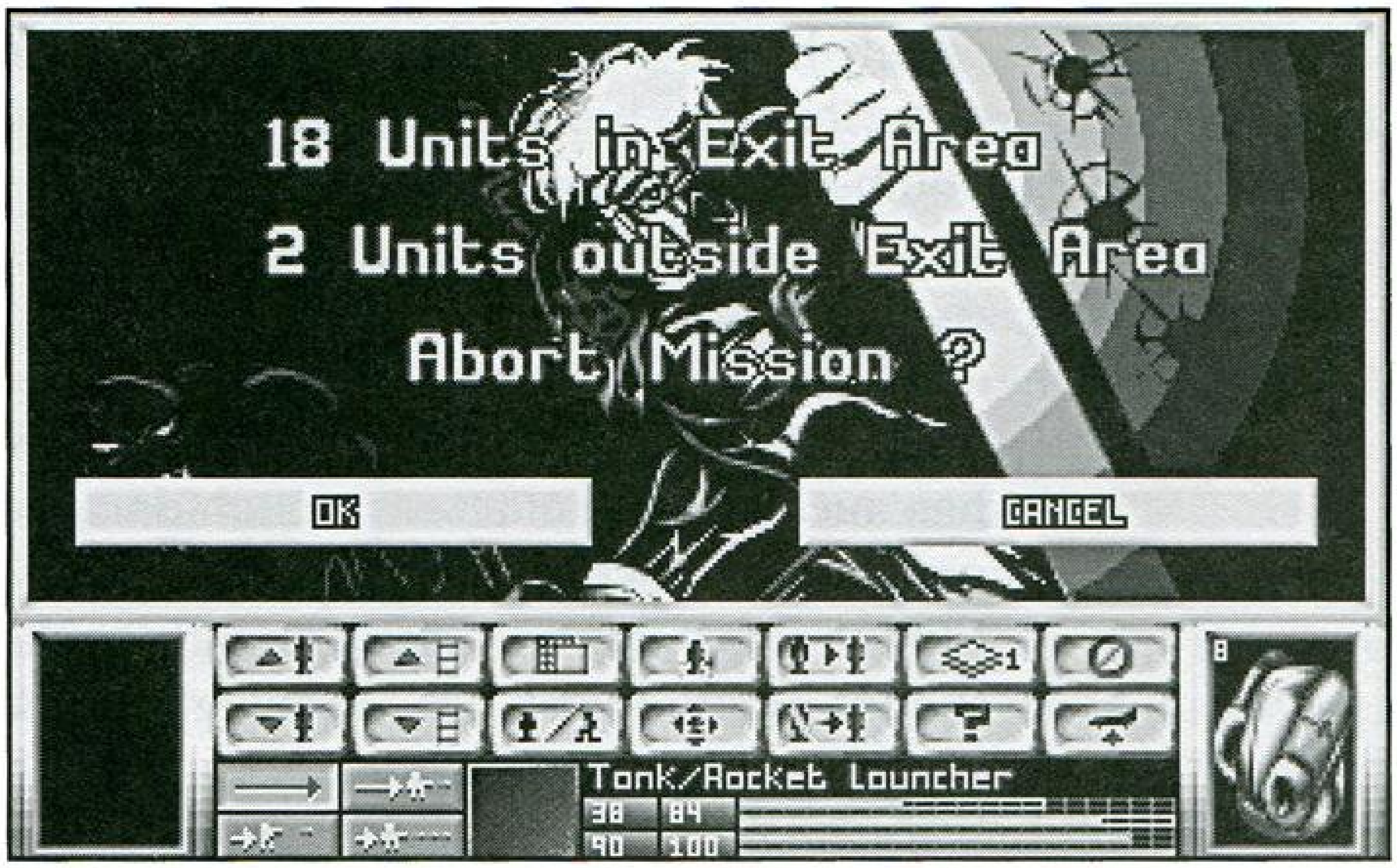
Unidentified equipment: Highly explosive UFO machinery of unknown function and that has no value.

DUSTING OFF

Sometimes the odds are just stacked against you, and there is nothing you can do but retreat. If this is the case, you can abort the ground assault by clicking the Dust Off button. This option orders the transport craft to take off and return to base immediately.

When this option is chosen, all soldiers and HWPs not aboard the transport are left behind at the ground assault site and are considered missing in action and cannot be recovered. If no one is aboard the craft, the transport itself is also lost. When this option is chosen, the screen shown in Figure 10-7 appears.

This screen tells you how many units are on the transport craft (or in the exit area) and how many will be left behind. If you change your mind about leaving, click the Cancel button. To accept the option, click OK.



18 Units in Exit Area

2 Units outside Exit Area

Abort Mission ?

Figure 10-7
The Dust Off screen.

In the case of raids on alien bases on Earth, soldiers and HWPs are deployed inside the base itself and do not exit from the transport craft as in other ground assaults. Most units are deployed inside two flashing green rooms on level 1 of the base. In some cases, a few units may be deployed in the rooms directly below the two green rooms.

To escape in the event of a dust-off, soldiers and HWPs must be inside these green rooms on level 1. Units not in these rooms are left behind and considered missing in action.

NOTE

Note: *Units must also be off the red elevators in order to be saved. Any units left standing on the elevators, regardless of which level they are on, are left behind, along with units in other parts of the base.*

If the Dust Off option is chosen while you're defending an X-COM base, the X-COM base, all its equipment, and all its personnel are lost to the invading aliens.

If you dust off during the final mission on Mars, all personnel are lost, regardless of location, and the game ends.

TYPES OF GROUND ASSAULTS

As mentioned earlier in this chapter, there are several different types of Ground Assaults in the game. Because of the differences in the layout and scope of each type, the strategies involved may vary widely based on the type of Ground Assault. The following sections describe each type of Ground assault, and suggest deployment and combat strategies for each situation.

UFO RECOVERIES

A UFO recovery ground assault results when an X-COM interceptor has successfully inflicted enough damage to an alien spacecraft to cause it to make a forced landing on Earth (see Figure 10-8). The UFO and its occupants drop directly to the ground, below the site of the interception. No UFO recovery mission results when the alien vessel is shot down over water.

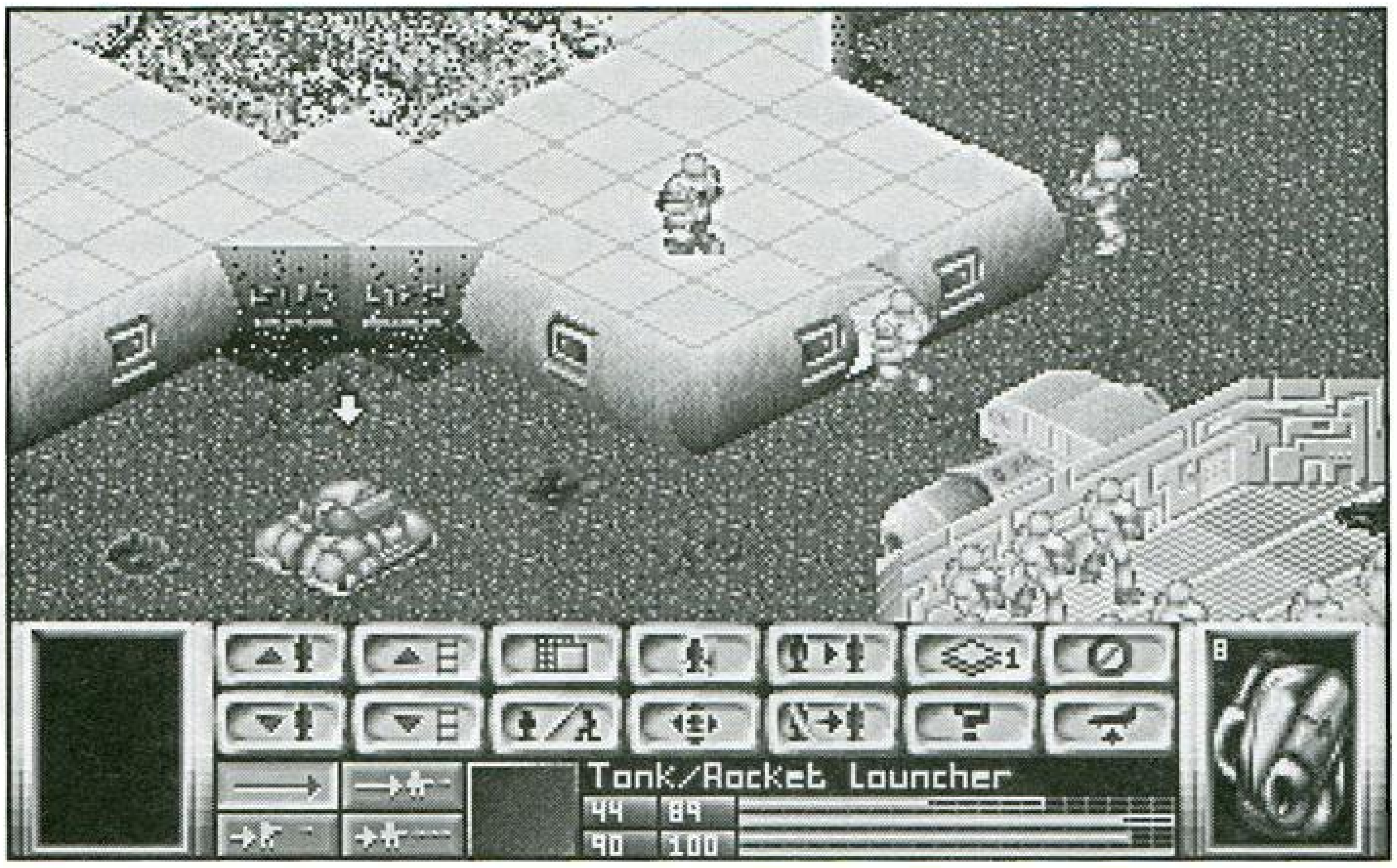


Figure 10-8
The site of a UFO recovery ground assault.

Although the terrain is different depending on in which area of the world the UFO crash-lands, UFO recovery missions always take place in suburban areas: farms, mountainsides, deserts, etc. In this type of mission, X-COM soldiers are searching for the UFO damaged by the interceptor. To successfully complete a UFO recovery, all alien crash survivors must be captured or killed. Successful completion of a UFO recovery mission results in the collection of all alien equipment, relics, and materials that have survived the crash.

UFO recoveries are usually the easiest of all ground assault missions to complete. This is good because they are probably the first type of ground assault missions you experience. For the first several game-months, a small- to moderate-size squad of soldiers can usually make fast work of most UFO recoveries. It is only later in the game, when larger UFOs begin to appear, that recovery missions become more dangerous. Generally speaking, the smaller the UFO, the easier the mission. Unfortunately, the smaller the UFO, the fewer equipment and artifacts there are to be found.

In addition to the general deployment strategies that have already been discussed, the best strategy for a UFO recovery is to find the UFO as quickly as possible. Spread out your soldiers, and cover the terrain as quickly as possible. As soon as the UFO is located, move two or three soldiers into position near it and find the UFO's door. Maneuver your soldiers so that their turn ends within one or two squares of the door, as shown in Figure 10-9. Be sure that you have reserved enough time units for at least a snap shot, just in case aliens are lurking on the other side and waiting to come out. This strategy may give your soldiers a chance for opportunity fire.

When your next turn begins, send the soldiers into the UFO, each heading in a different direction, to search for aliens. Although every UFO type has a different layout, aliens are more likely to be found in certain places than in others. They tend to congregate near control consoles and in engine rooms. Although they sometimes roam corridors, they are more likely to stay near doorways and elevators.

While one group is searching the UFO, send out your other soldiers to search the surrounding countryside. Be especially careful of terrain types that offer lots of hiding places. Buildings, tall grass, hedges, and dense groves of trees are prime hiding places for aliens. After all aliens have been eliminated or captured, your mission is complete.

As with all missions, it is useful to have one or more HWPs along with you to help with the heavy work. Unfortunately, HWPs are useful only in the terrain surrounding the UFO; they are too large to fit into most UFOs, and those they can enter allow no maneuvering room for these large units.

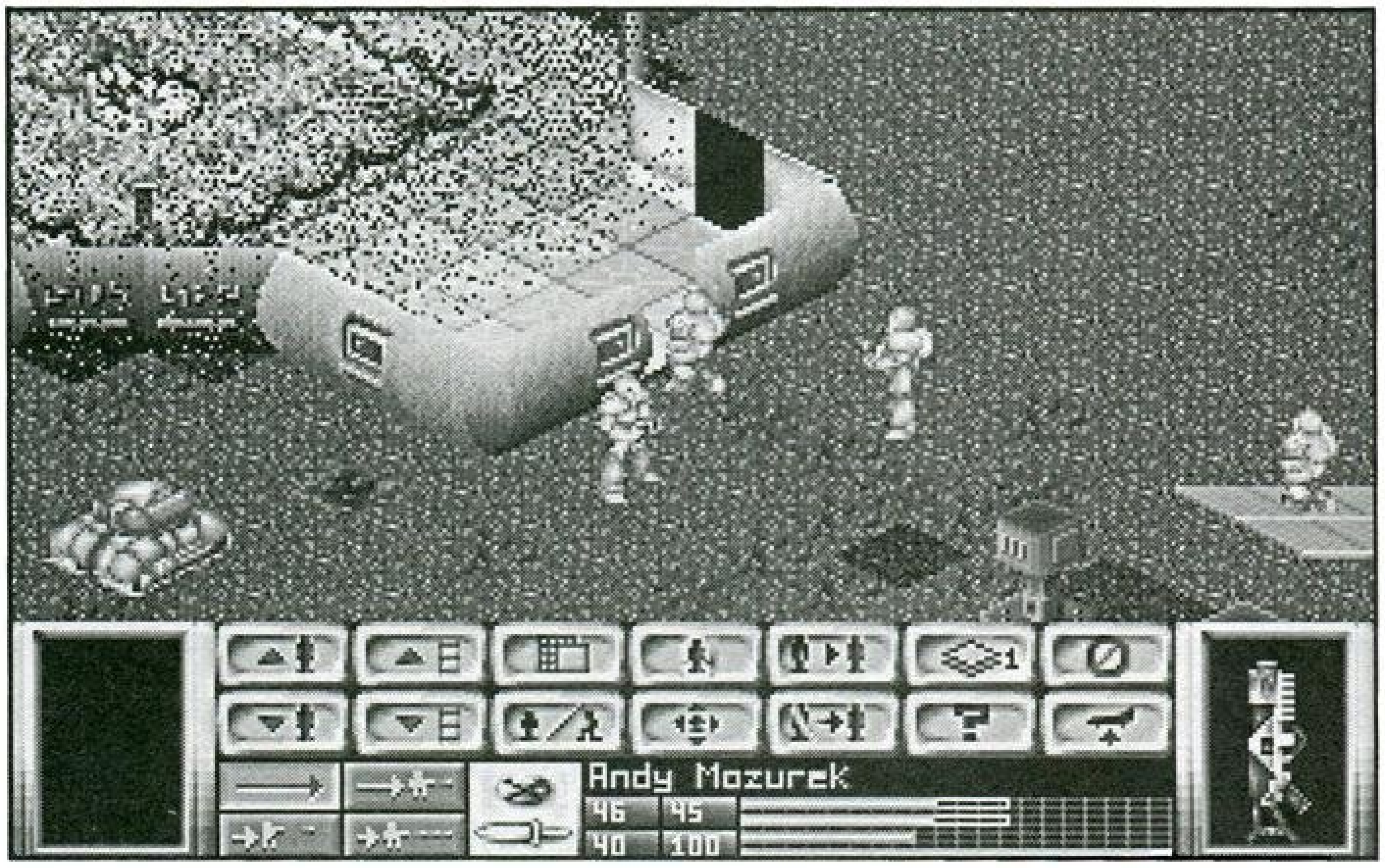


Figure 10-9
X-COM soldiers about to enter a damaged UFO.

The number and rank of aliens found at a UFO crash site depends on the size and type of the UFO and on the difficulty level of the game. It also depends on the race of aliens piloting the UFO, because not all races of aliens have every listed rank. Table 10-1 shows the number of aliens you can expect to find in each UFO type.

NOTE

Note: *In the case of UFO recovery missions, the number of live aliens may be lower because some may be killed in the crash.*

Although the deck plan for every class of UFO is different, UFOs within each class are always laid out in the same way (all Large Scouts are the same, all Battleships are the same, etc.). Because the aliens tend to congregate in the same areas of the ship each time, it can be helpful to know how the UFOs are laid out before you go in. Figures 10-10 through 10-17 show the deck plans for each type of alien spacecraft in the game.

All these deck plans show the UFO as it appears when it's intact. Many of the structures and walls may be destroyed as a result of a crash landing. When you're on a UFO recovery mission, therefore, don't count on a certain bulkhead that appears on the plans to be intact and usable as a hiding place. It might be the last assumption you ever make for one of your soldiers.

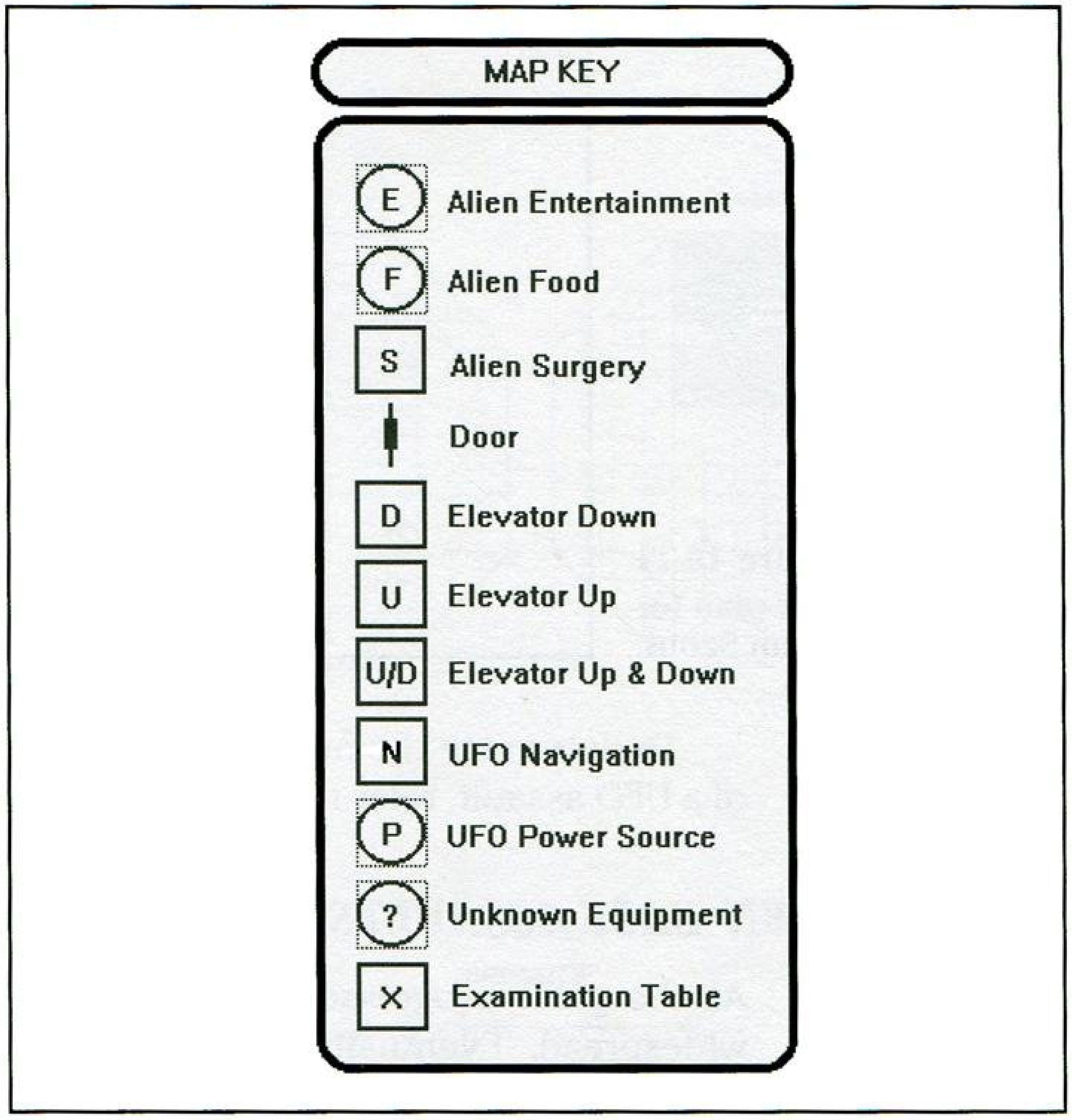
UFO ASSAULTS

UFO assaults are ground assaults which involve the attack and seizure of a UFO that has landed to carry out a mission (see Figure 10-18). Your detection systems can often locate a UFO landing site. In this case, you have a chance to dispatch your soldiers in time to stop the aliens from carrying out whatever insidious mission they have planned.

The execution of a UFO assault is handled in much the same way as a UFO recovery, by using the same tactics and strategies. The main differences are that the ship contains its full complement of aliens and that all its systems are intact and undamaged. Although there tends to be more competition involved in successfully completing UFO assaults, they are usually much more profitable than UFO recoveries in terms of recovered equipment and artifacts.

Table 10-1 Alien Deployment for Each UFO Type

Level	Soldiers	Navig.	Eng.	Medics	Leaders	Comm.	Terrorists
Small Scout							
Beginner/Experienced	1	—	—	—	—	—	—
Veteran/Genius	1	—	—	—	—	—	—
Superhuman	1	—	—	—	—	—	—
Medium Scout							
Beginner/Experienced	2-4	1-2	—	—	—	—	—
Veteran/Genius	3-5	1-2	—	—	—	—	—
Superhuman	4-6	2-3	—	—	—	—	—
Large Scout							
Beginner/Experienced	1-6	1-2	1-2	—	—	—	—
Veteran/Genius	2-7	1-2	1-2	—	—	—	—
Superhuman	3-8	1-2	2-3	—	—	—	—
Harvester							
Beginner/Experienced	5-9	1	2	1	1-2	—	—
Veteran/Genius	7-11	1	2	1	1-2	—	—
Superhuman	9-13	2	2	2	1-2	—	—
Abductor							
Beginner/Experienced	3-7	1-2	2	2	1	—	—
Veteran/Genius	4-8	1-2	2	3	1	—	—
Superhuman	5-9	1-2	2	4	1	—	—
Terror Ship							
Beginner/ Experienced	4-5	1	1	1-2	1	—	2-6
Veteran/Genius	5-6	1	1	1-2	1	—	4-8
Superhuman	6-7	2	2	1-2	1	—	6-10
Supply Ship							
Beginner/Experienced	5-11	1	1	1	1	—	—
Veteran/Genius	6-12	1	1	1	1	—	—
Superhuman	7-13	2	2	2	1	—	—
Battleship							
Beginner/Experienced	4-8	1	1	1	1	1	0-2
Veteran/Genius	6-10	1	1	1	2	1	2-4
Superhuman	8-12	2	2	2	3	1	4-6


MAP KEY
E Alien Entertainment
F Alien Food
S Alien Surgery
Door
D Elevator Down
U Elevator Up
U/D Elevator Up & Down
N UFO Navigation
P UFO Power Source
? Unknown Equipment
X Examination Table

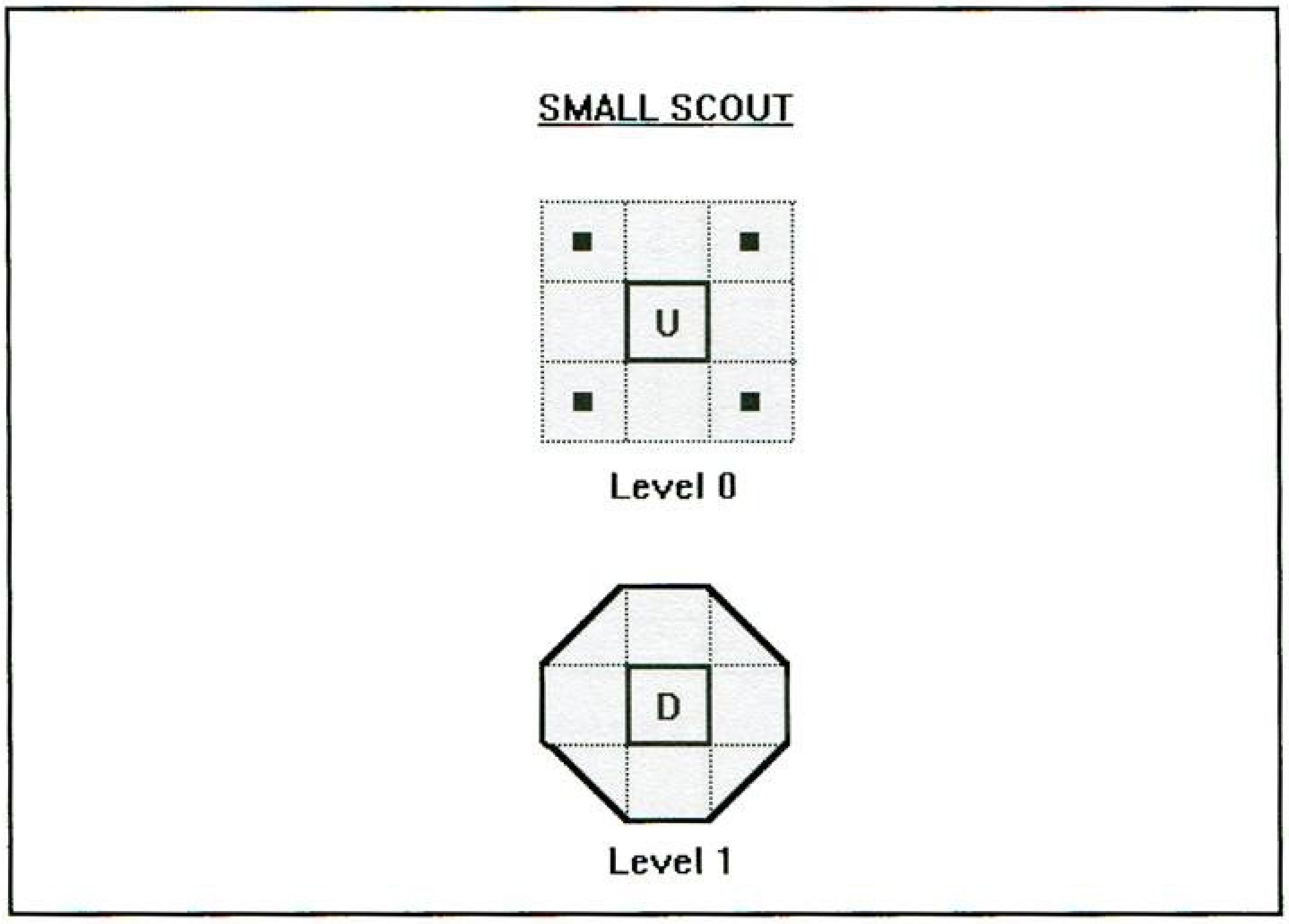

SMALL SCOUT
U
Level 0
D
Level 1

Figure 10-10
The deck plan
for a Small Scout.

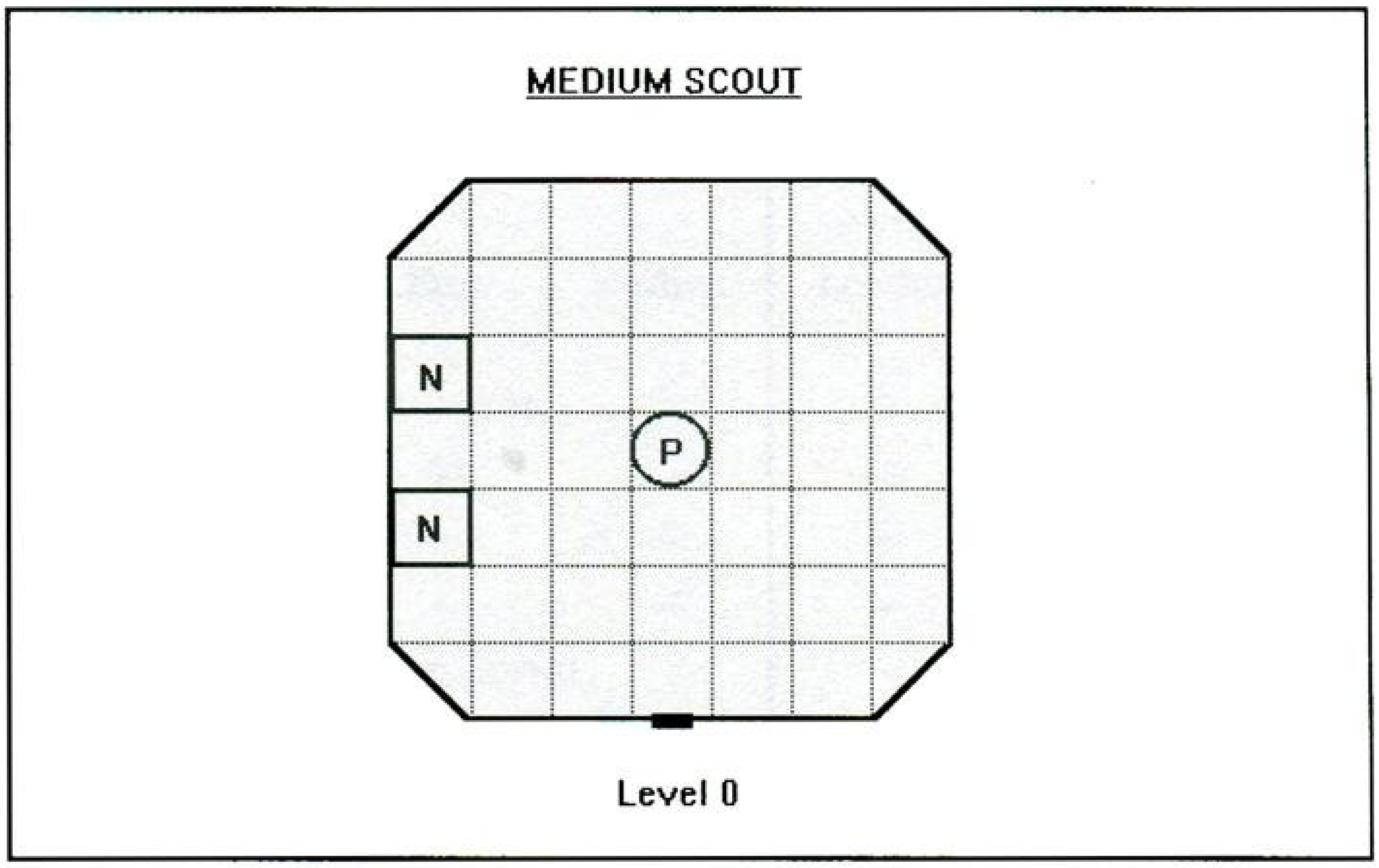


Figure 10-11
The deck plan for a Medium Scout.

To determine the number and rank of aliens present at the site of a UFO assault, refer to Table 10-1.

ALIEN BASE ASSAULTS

As the game progresses, alien presence on Earth becomes more widespread. Eventually, you may discover that the aliens are strengthening their foothold on the planet by constructing bases in various parts of the world. When these bases are discovered, it is

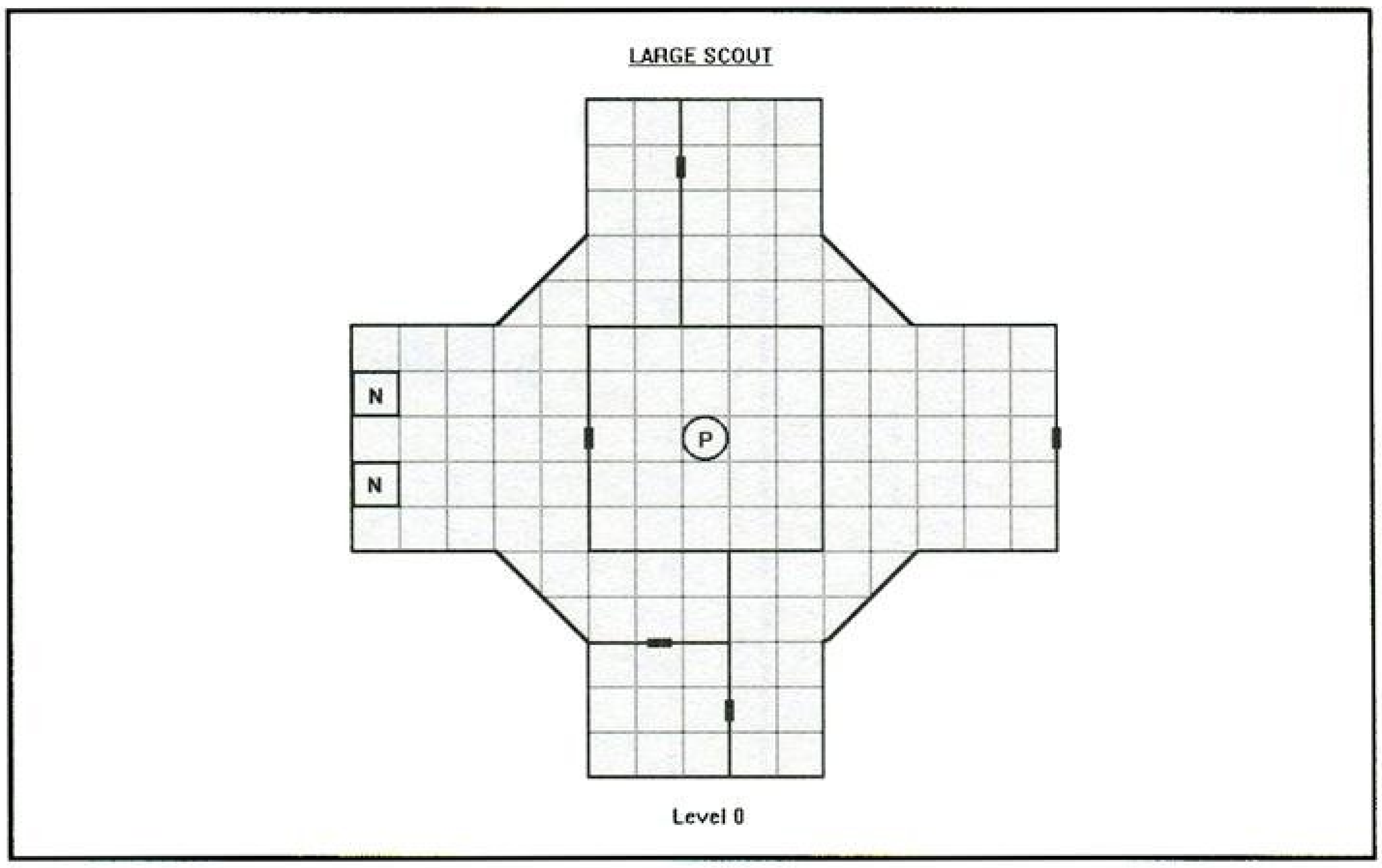


Figure 10-12
The deck plan for a Large Scout.

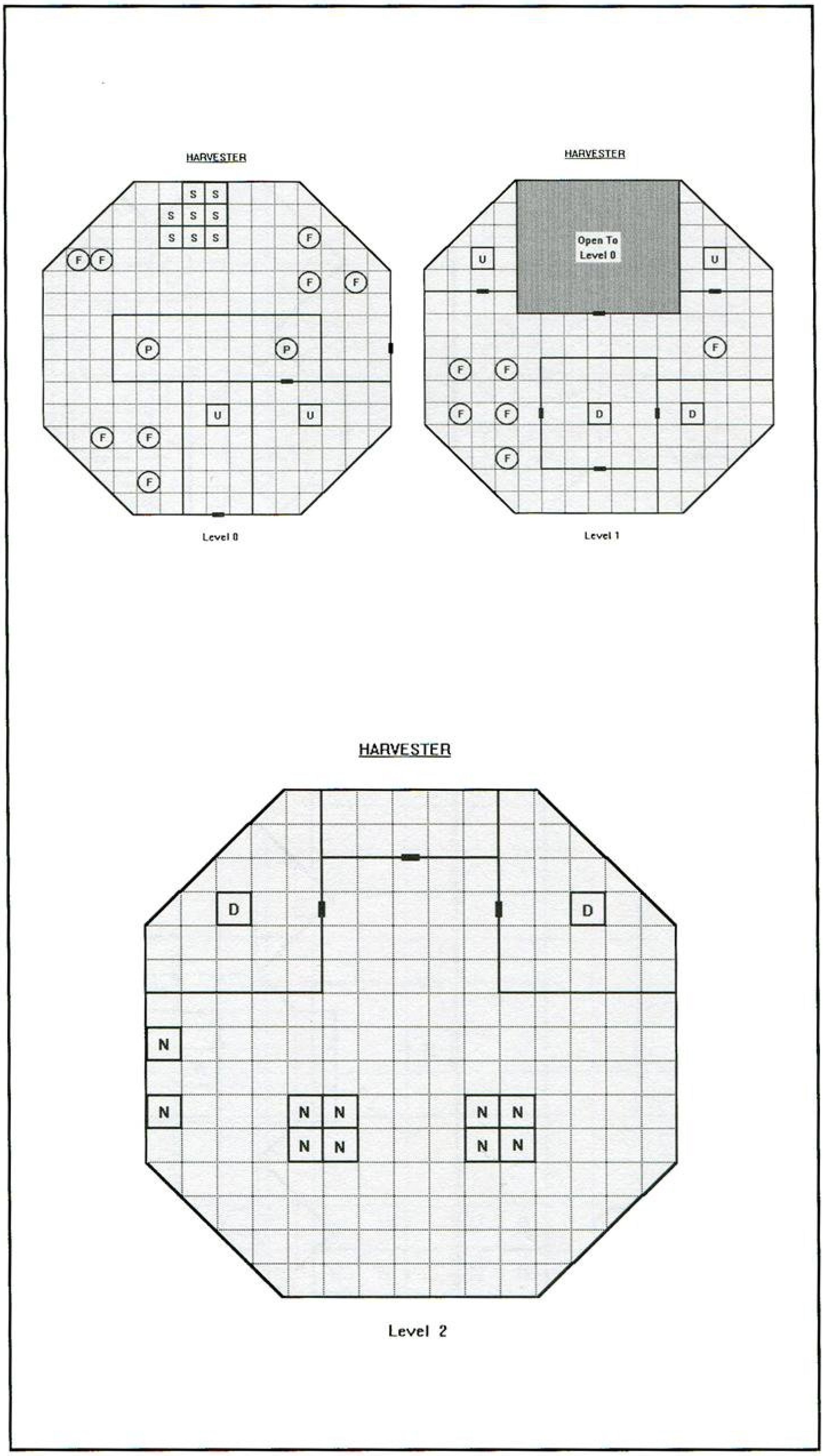

HARVESTER
S S
S S S
S S S
F F
F
F F
P P
U U
F F
F
Level 0
HARVESTER
U
Open To Level 0
U
F
F F
F F
D D
F
Level 1
HARVESTER
D D
N
N
N N
N N
N N
N N
Level 2

Figure 10-13
The deck plan
for a Harvester.

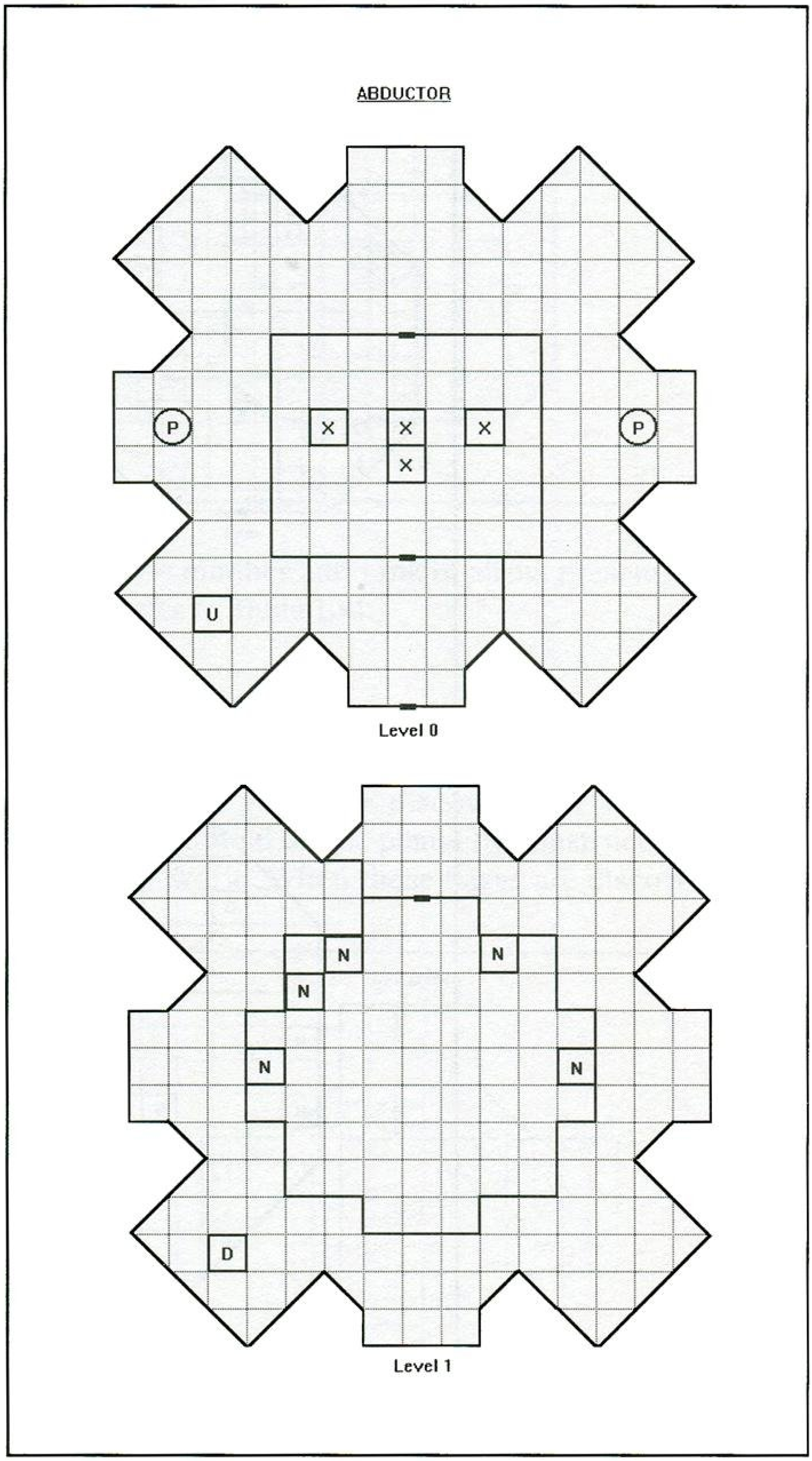

ABDUCTOR
P
X
X
X
P
X
U
Level 0
N
N
N
N
N
D
Level 1

Figure 10-14
The deck plan for an Abductor.

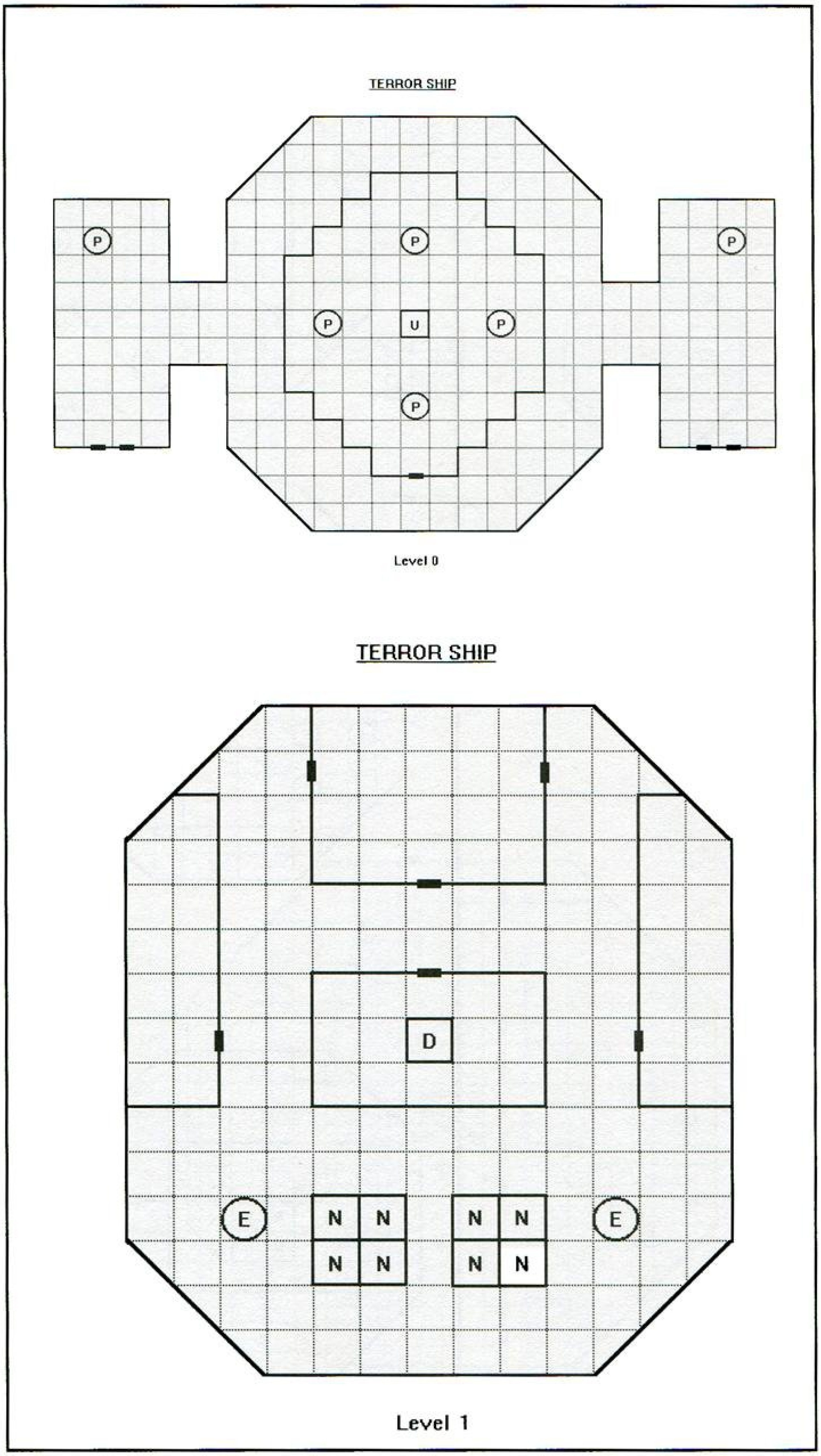

TERROR SHIP
P
P
P
P
U
P
P
P
Level 0
TERROR SHIP
D
E
N
N
N
N
N
N
N
N
E
Level 1

Figure 10-15
The deck plan
for a Terror Ship.

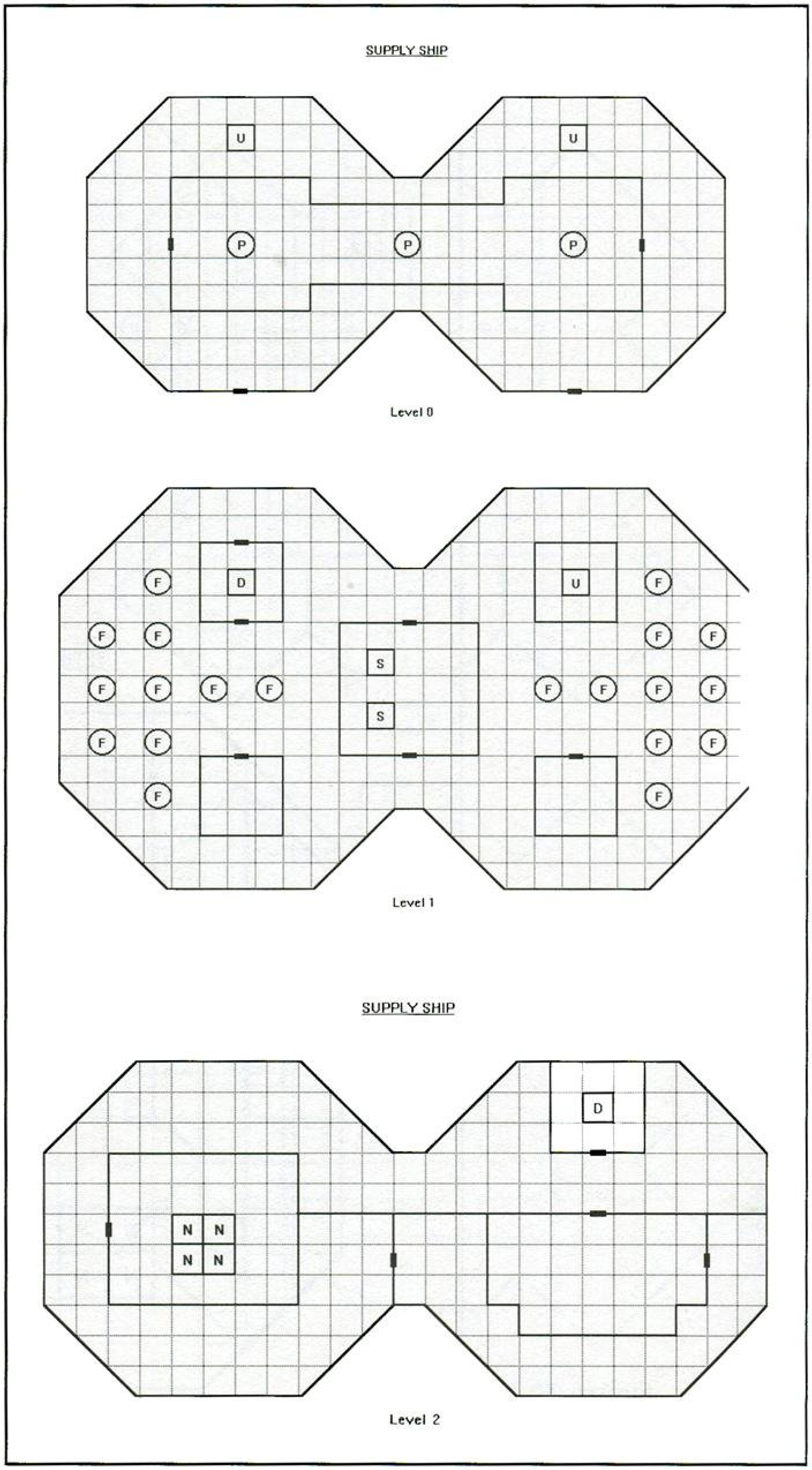

SUPPLY SHIP
U
U
P
P
P
Level 0
F
D
U
F
F
F
F
F
F
S
F
F
F
F
F
F
F
F
S
F
F
F
F
F
Level 1
SUPPLY SHIP
D
N
N
N
N
Level 2

Figure 10-16
The deck plan for a base Supply Ship.

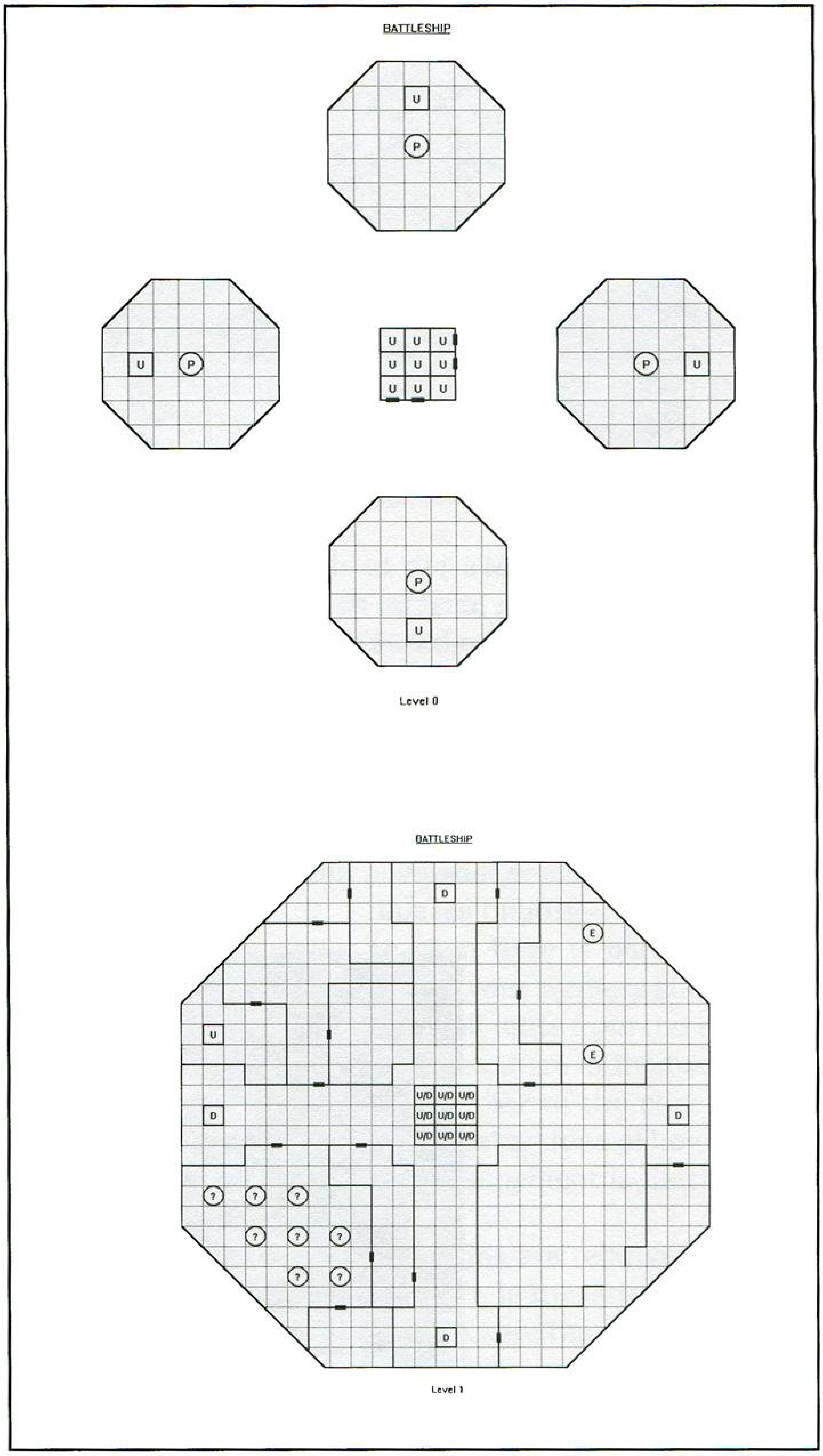

BATTLESHIP
U
P
U
U
U
U
U
U
U
U
U
U
P
U
P
U
P
Level 0
BATTLESHIP
D
E
U
E
U/D
D
D
?
D
Level 1

Figure 10-17a The deck plan for a Battleship.

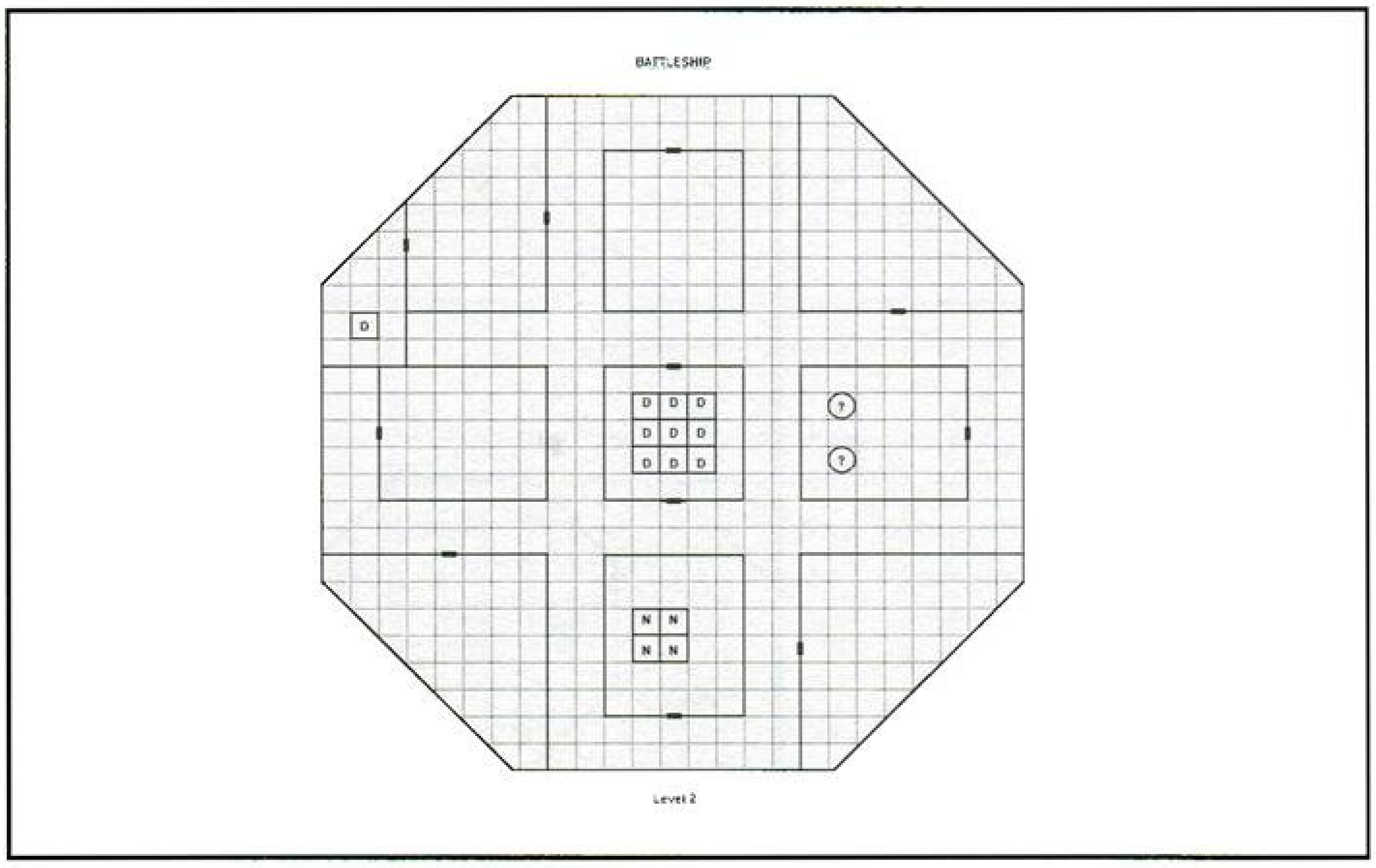


Figure 10-17b
The deck plan for a Battleship. (Level 2)

X-COM's job to destroy them. To defeat an alien base, all aliens inside must be captured or killed.

Alien bases can be difficult to defeat because of the number and placement of aliens. Not all areas of the base are well-lit, and the aliens usually find many places in which to hide. Unlike UFOs, alien bases are laid out in a slightly different way every time. You have to deal with some surprises, therefore, when it comes to exploring the base. The design of the base core and control center is always the same, however, and this area is your ultimate goal in this type of ground assault.

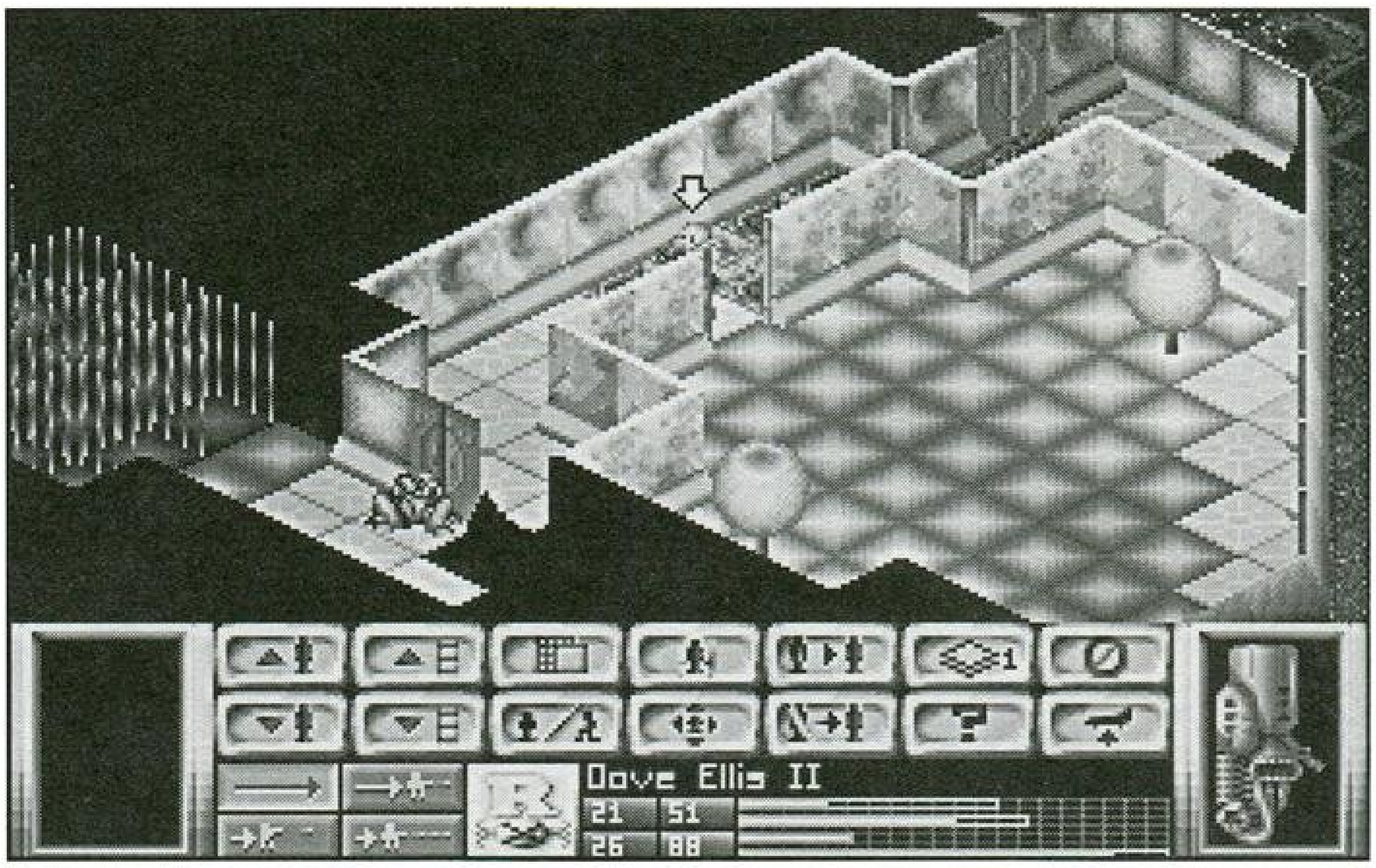


Figure 10-18
A UFO assault in progress

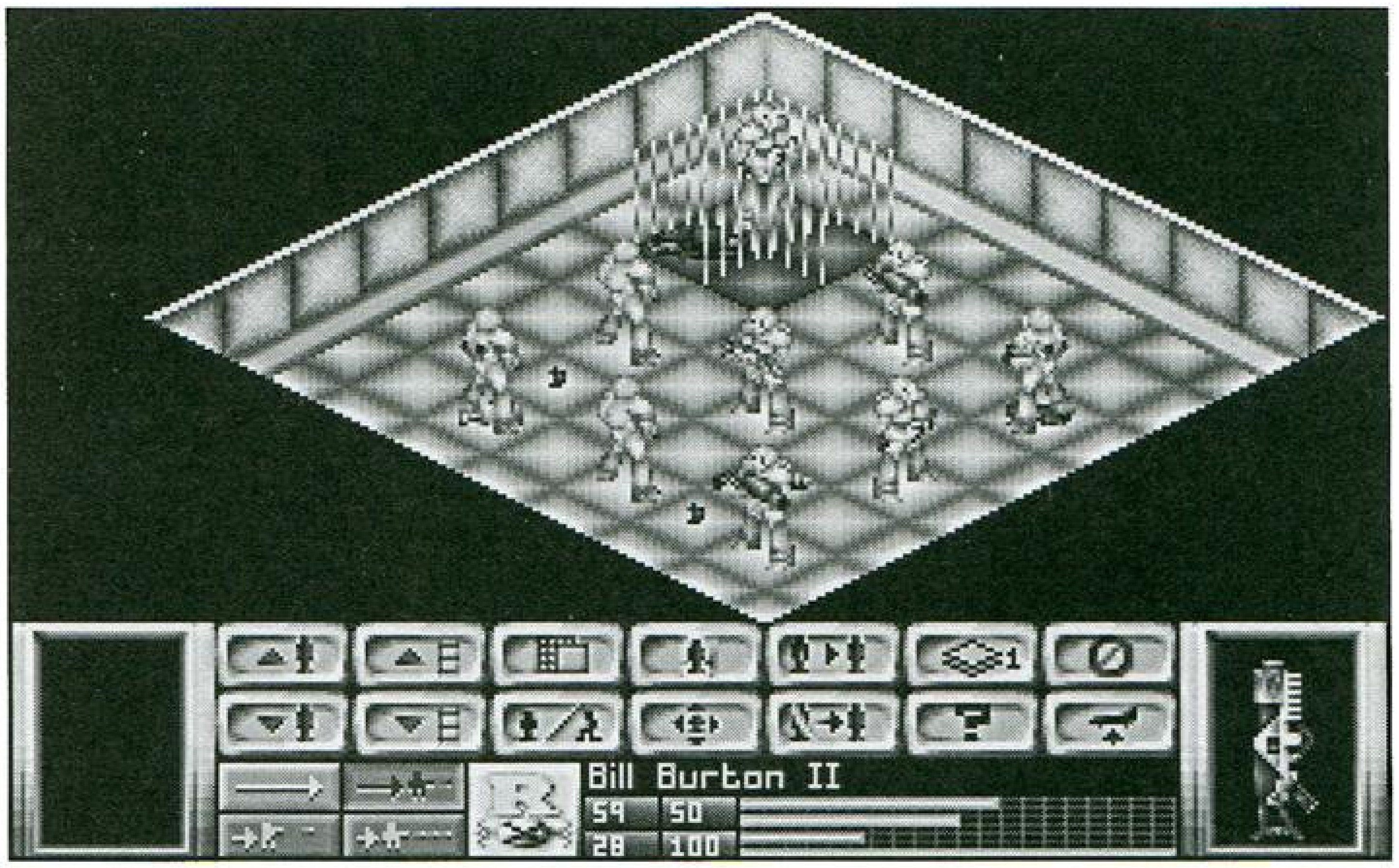


Figure 10-19 Entering an alien base.

Alien base assaults begin with most of your units deployed in two green rooms on level 1 of the Battlescape, one floor above the bulk of the base. If you have a large number of units, some may begin in the area directly below the two green rooms. Alien bases, unlike UFOs, have enough maneuvering room to allow the use of HWPs. It is not a bad idea to have one or two heavy weapons along to help scout the area. Advanced weapons and armor are a must—don't even think of attempting an alien base assault before you are properly equipped.

The key strategy in invading an alien base is patience. Many twisting corridors and blind turns can get your soldiers killed if they rush into them blindly. First bring down all units from the two staging rooms and into the rooms below. Move them individually away from the elevators; send at least one soldier to the edge of each room or corridor that adjoins the area to get an idea of how the surrounding structures are laid out. This deployment is illustrated in Figure 10-20.

Most of the time, the two staging rooms are relatively close to one another, but once in a while they aren't. In the latter case, check the overhead map view to get an idea of where the two areas are in relation to one another, and send out a unit from each area in the direction of the other. This technique enables you to join both groups of soldiers as quickly as possible.

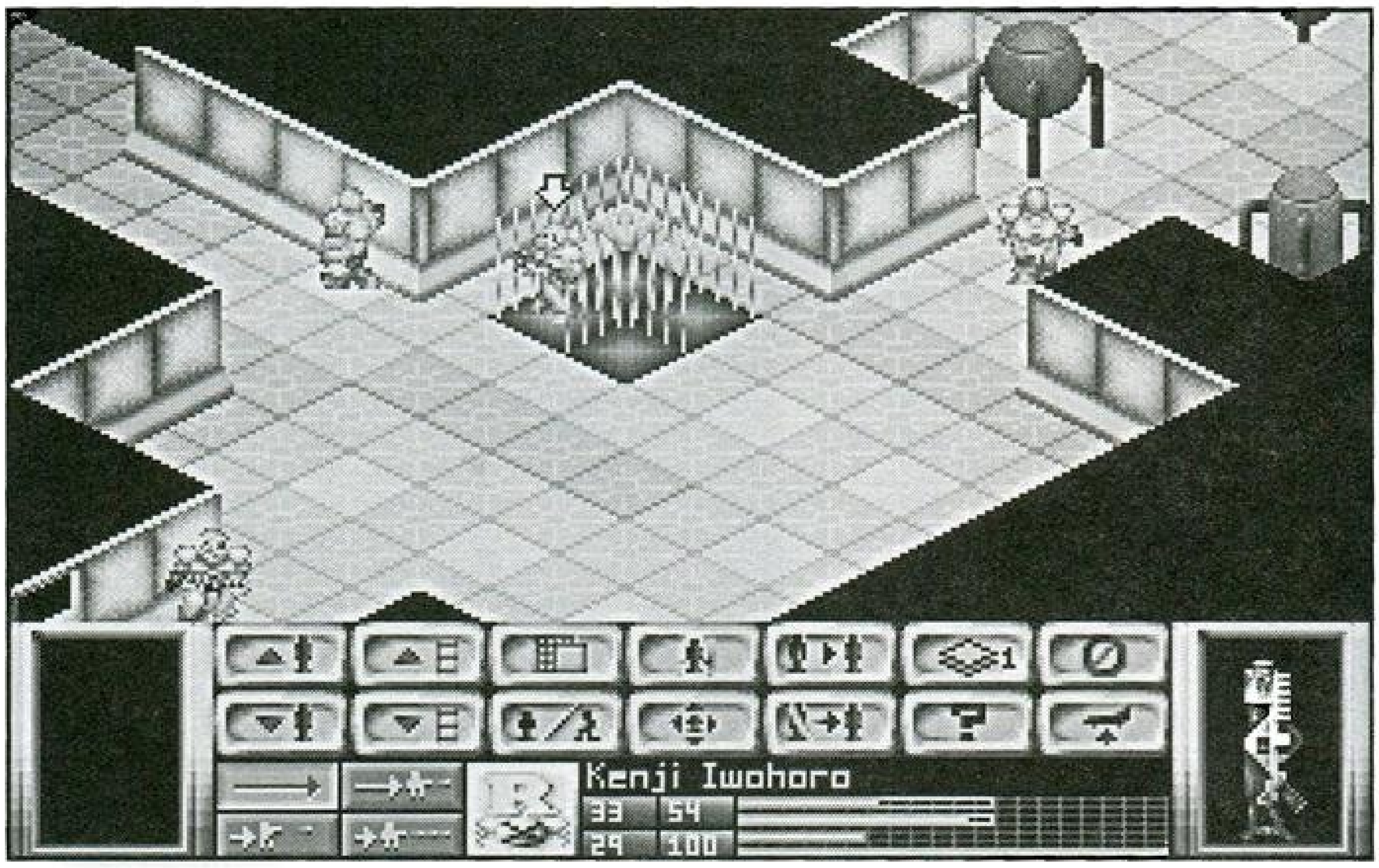


Figure 10-20
Deployment for an alien base assault.

As with other types of ground assaults, don't clump your soldiers together. Move them in ones and twos and stagger their progress along corridors so that they are at least several squares apart. This strategy minimizes the chances of being attacked by grenades or other high-explosives. Explore as much of the base as you can as quickly as possible.

Although most areas in an alien compound are fairly tight and narrow, there are sometimes large laboratories and storage areas, such as the one in Figure 10-21. These areas make excellent hiding places for numerous aliens and should be handled carefully. Favorite alien hiding places include the two-story tower at the center of the room and also behind all the storage and display canisters.

When you encounter these types of rooms, discretion is the better part of valor. A soldier who runs into one of these areas can make it halfway across and not even spot an alien. Then when the aliens' turn begins, that soldier becomes a quick statistic. Have your soldiers take up positions at the entrance to the room, therefore, and fire high-explosive weapons into the room. Make sure that at least one round is fired into the tower in the center because this is a great hiding place for snipers. This crude method tends to destroy any useful artifacts in the room, but it works.

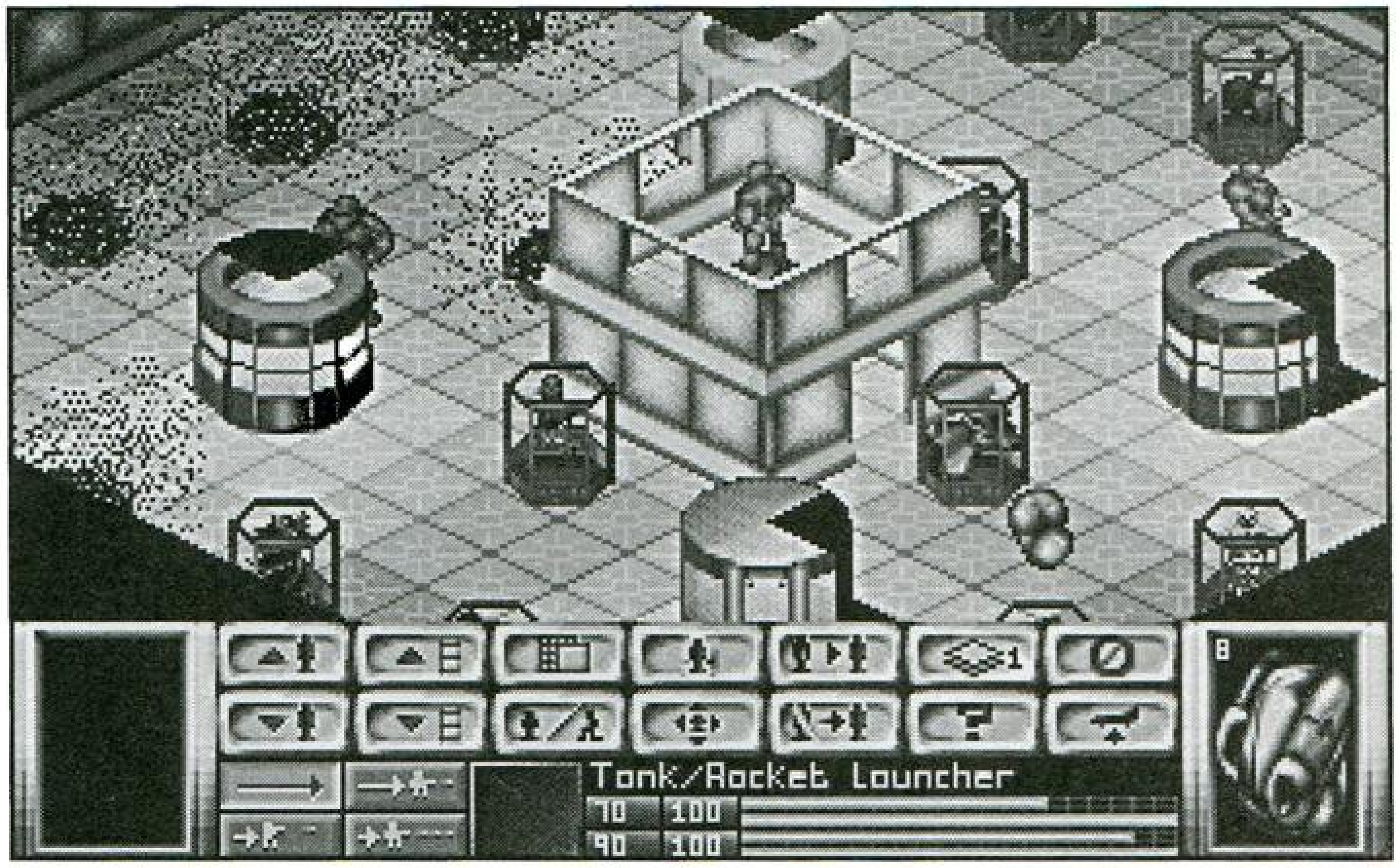


Figure 10-21 Deploying forces to cover an alien lab.

A better approach is to use tanks or hovertanks to explore the room. Move into the area with your HWPs and explore it completely while your soldiers cover the exits. Either the soldiers or the tanks can kill any aliens that get flushed out. This method tends to be a little less destructive, and if by some miracle no aliens are lurking nearby, you save yourself a roomful of alien artifacts.

The most useful consequence of an alien base assault is the possibility of capturing an alien commander. Nearly every base has a commander, and only these high-ranking aliens have the information you need in order to travel to Mars and win the game. Because the capture of a commander plays such a key role in the game, you should never go to an alien base assault without some sort of stun weapon.

The base commander is always in the command center of the base. This easily recognized area is always laid out in the same manner regardless of its position relative to the base. The command center is a two-level structure, with an engineering and reactor center on level 0, and a control room on level 1. The commander normally remains on level 1, and several guards usually patrol the corridors and engineering section below. A base command center is shown in Figure 10- 22.

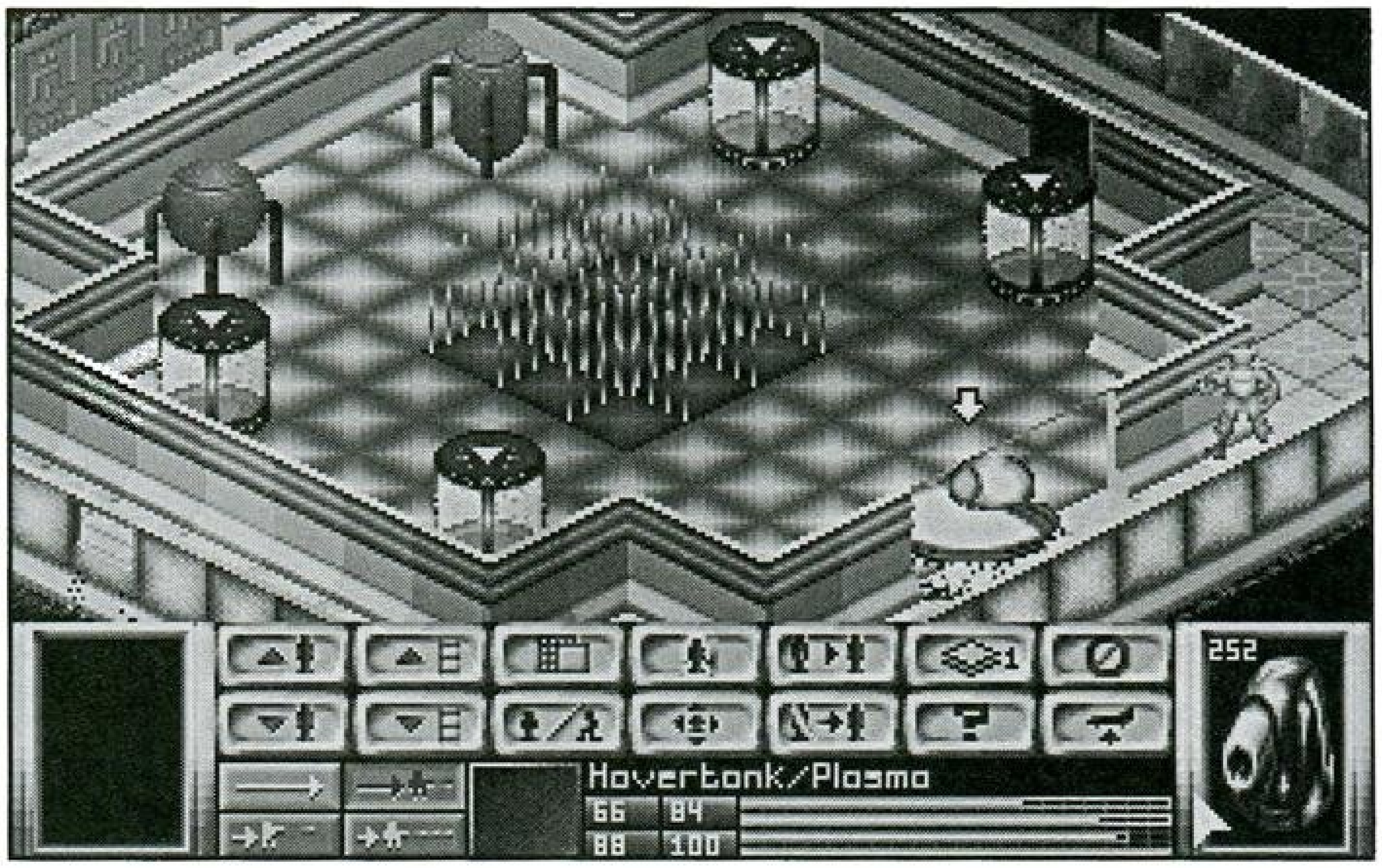


Figure 10- 22. The command center of an alien base.

When you find the command center, move in immediately. Send out two units, one down each side of the corridor, and have them meet at the double doors that lead to the engineering area. One of these units should be an HWP, if possible. When the units meet at the doors, have one of them move through it at the beginning of the next turn. This strategy is likely to draw fire from the commander on the level above. If any shots hit one of the reactors in the engineering section, it sets off a chain reaction that generally levels the room and kills any unit that happens to be inside. The unit that moves through the door should therefore be either very strong (such as a tank) or extremely expendable.

After the leader has fired from above, you have a choice: You can move one or more units onto the elevator and go up to face the commander, or you can fire blindly up through the elevator shaft. If you have enough TUs available, go up to level 1 and find the commander before you fire rather than waste ammunition by firing blindly into the dark. Just be sure that you have enough TUs to get off a shot when you do find him!

After all aliens have been killed or captured, the mission ends.

The number and rank of aliens you can expect to find in an alien base are listed in Table 10-2.

Table 10-2 Alien Deployment in Alien Bases

Level	Soldiers	Navig.	Eng.	Medics	Leaders	Comm.	Terrorists
Beginner/Experienced	5-9	1	1	1	2	1	1-3
Veteran/Genius	6-10	1	1	1	3	1	3-5
Superhuman	7-11	2	2	1	4	1	5-7

TERROR MISSIONS

One of the tasks performed by UFO crews is the random demoralization of the citizens of Earth. To achieve this goal, UFOs are sent to land in urban areas and send out terrorists and soldiers to frighten and kill the people in the chosen city. In this type of location, known as a terror site (see Figure 10-23), you and your soldiers encounter some of the fiercest battles in the game: terror missions.

When a terror site becomes active, a message window is displayed on the Geoscape screen, as shown in Figure 10-24.

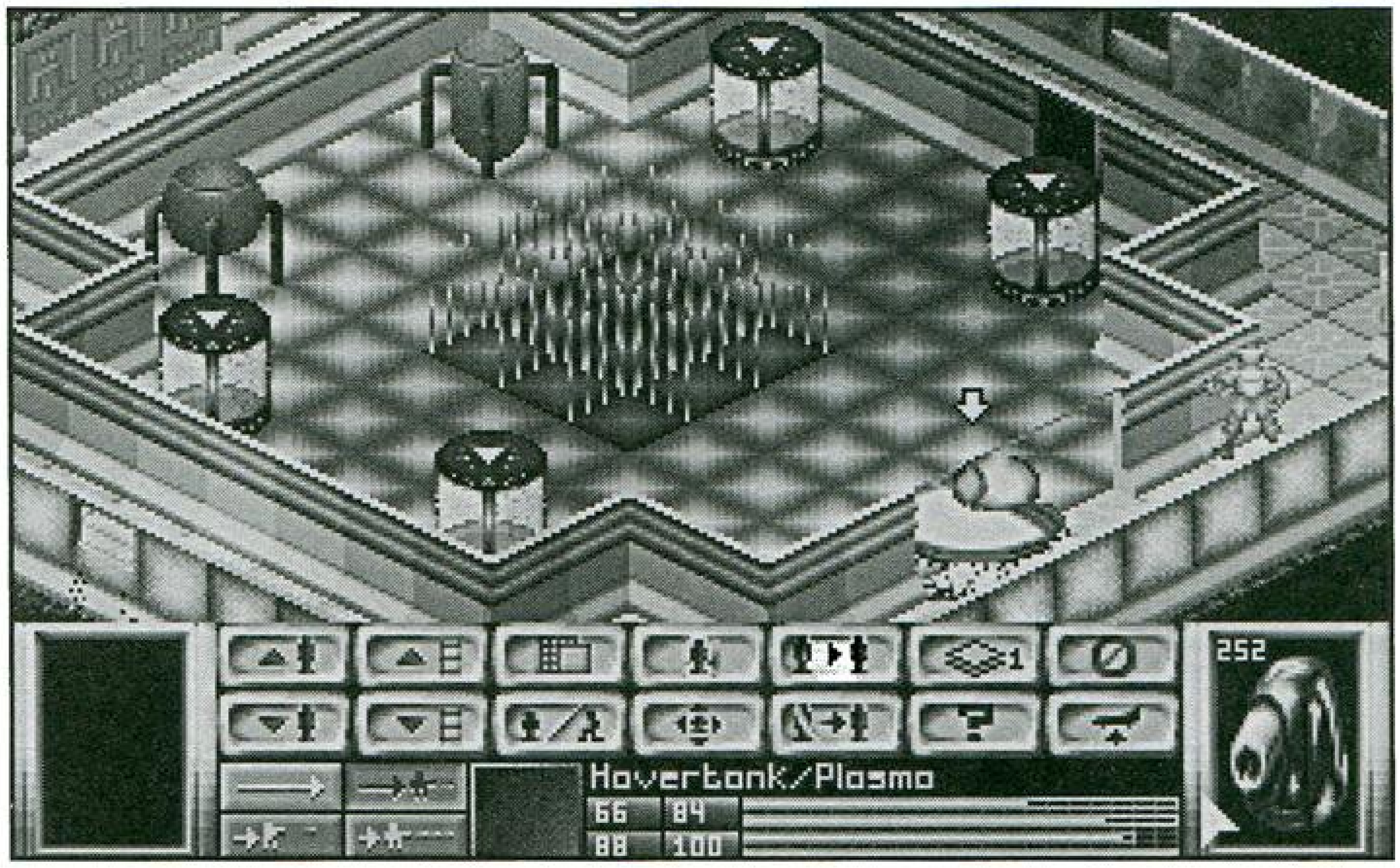
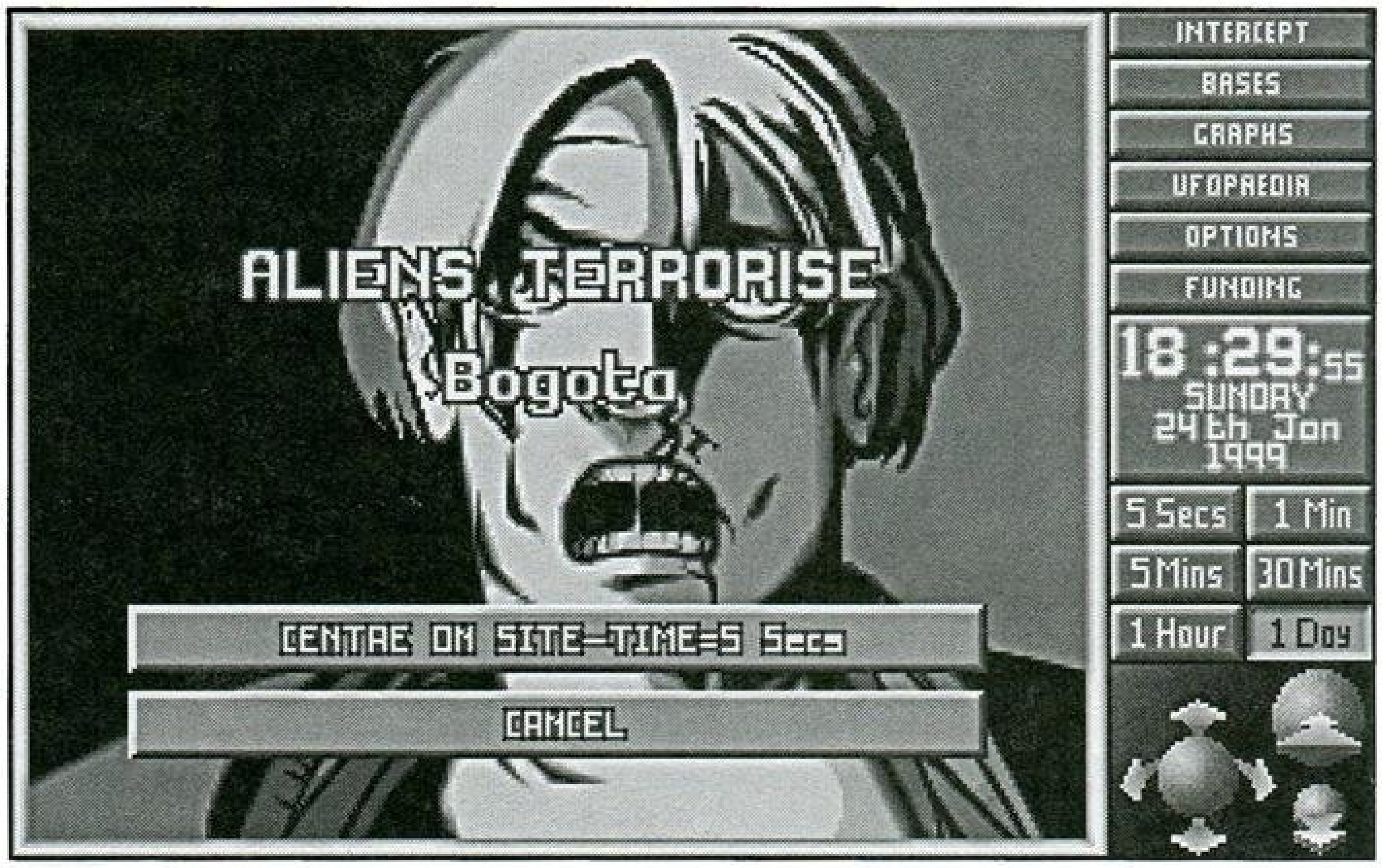


Figure 10-23
The command center of an alien base.



ALIENS TERRORISE

Bogota

CENTRE ON SITE–TIME=5 Secs
CANCEL
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
18:29:55
SUNDAY
24th Jan
1999
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 10-24
A terror mission about to begin.

If you choose the option to Center on Site, the game time is slowed to five seconds, and the globe centers on the terror site. Load a transport craft if you haven't already done so, and launch it with the terror site as the target. When you arrive, the mission begins as it does in a UFO recovery or a UFO assault: with the HWPs and crew inside the landing vehicle.

Alien deployment at a terror site, as with deployment in UFO recovery and capture missions and alien bases, is based on the level of difficulty. Table 10-3 shows the number of aliens you can expect to find when you visit a terror site.

Table 10-3 Alien Deployment at a Terror Site

Level	Soldiers	Navig.	Eng.	Medics	Leaders	Comm.	Terrorists
Beginner/Experienced	4-5	1	1	1-2	1	—	2-6
Veteran/Genius	5-6	1	1	1-2	1	—	4-8
Superhuman	6-7	2	2	1-2	1	—	6-10

One of the first problems you encounter on a terror mission is how to deploy your soldiers most effectively. Unlike UFO recoveries and UFO assaults, there is no central location in which most of the aliens may be found. They are scattered throughout the Battlescape: They hide inside buildings, snipe at you from rooftops, lurk in dark alleys and parks, and generally roam all over the place. There is no clearcut direction in which you should send an assault team to be most effective. Some strategies apply relatively well, however.

To begin with, deploy any HWPs as described in the section "UFO Recoveries," earlier in this chapter. Get a quick fix on your position, and reveal as much terrain as possible while still reserving time units for a snap shot. Immediately kill any aliens in the vicinity; attempts to capture them can go awry and endanger your soldiers who are still clustered together inside the transport.

After the HWPs have been deployed, move out as many soldiers as possible, and be careful not to group them together too closely. If you have a large number of soldiers, move out as many as possible in one turn, and move out the remainder on the next turn so as not to create clumps of soldiers who tend to be prime targets for aliens with grenades.

Many difficulties exist when it comes to dealing with the terrain and obstacles at a terror site. Because they always take place in urban areas, terror sites usually have more buildings in the area than any other ground assault does. Aliens hide inside and on top of the buildings and act as snipers. You usually can't see an alien who is firing at you from a window until after it has shot and killed one of your soldiers.

Even if the aliens don't get inside the buildings, the proximity of the buildings to one another creates many narrow, dark alleys in which aliens can hide. Remember that aliens can see just as well in the dark as they can in the light, so they have a distinct advantage if they have shadows to hide in.

Another factor to be aware of on a terror mission is the presence of innocent civilians in the area. As citizens of the city the aliens are terrorizing, they are the alien's primary targets. It is your job, as X-COM operatives, to make sure that no harm comes to them.

In a practical sense, this consideration means two things: First, you must move as quickly as possible to eliminate all of the aliens before they can kill the civilians, or you must keep the aliens busy enough that they are forced to ignore the civilians and concentrate their fire on X-COM units. Neither one of these tasks is easy. The primary purpose of the aliens' mission is to eliminate the civilians. Given the choice between firing at an X-COM soldier and an innocent bystander, the aliens generally choose the innocent bystander.

It is especially important to keep the aliens occupied when Chryssalids are present. When Chryssalids attack humans, the humans turn into Zombies that, in turn, attack your soldiers (see Figure 10-25). Chryssalids also lay their eggs inside the body of their victim. When a Zombie is killed, therefore, a new Chryssalid hatches from it. If you're not careful, after a few turns you can end up with many more aliens than you started with.

Second, the presence of civilians means that you must be careful not to kill any citizens yourself. This task isn't easy either. In virtually any other situation, you can fire at will and destroy potential alien hiding places with high-explosive weapons and not give it a second thought. In a terror mission situation, you must restrain yourself from engaging in this behavior or else you risk killing citizens.

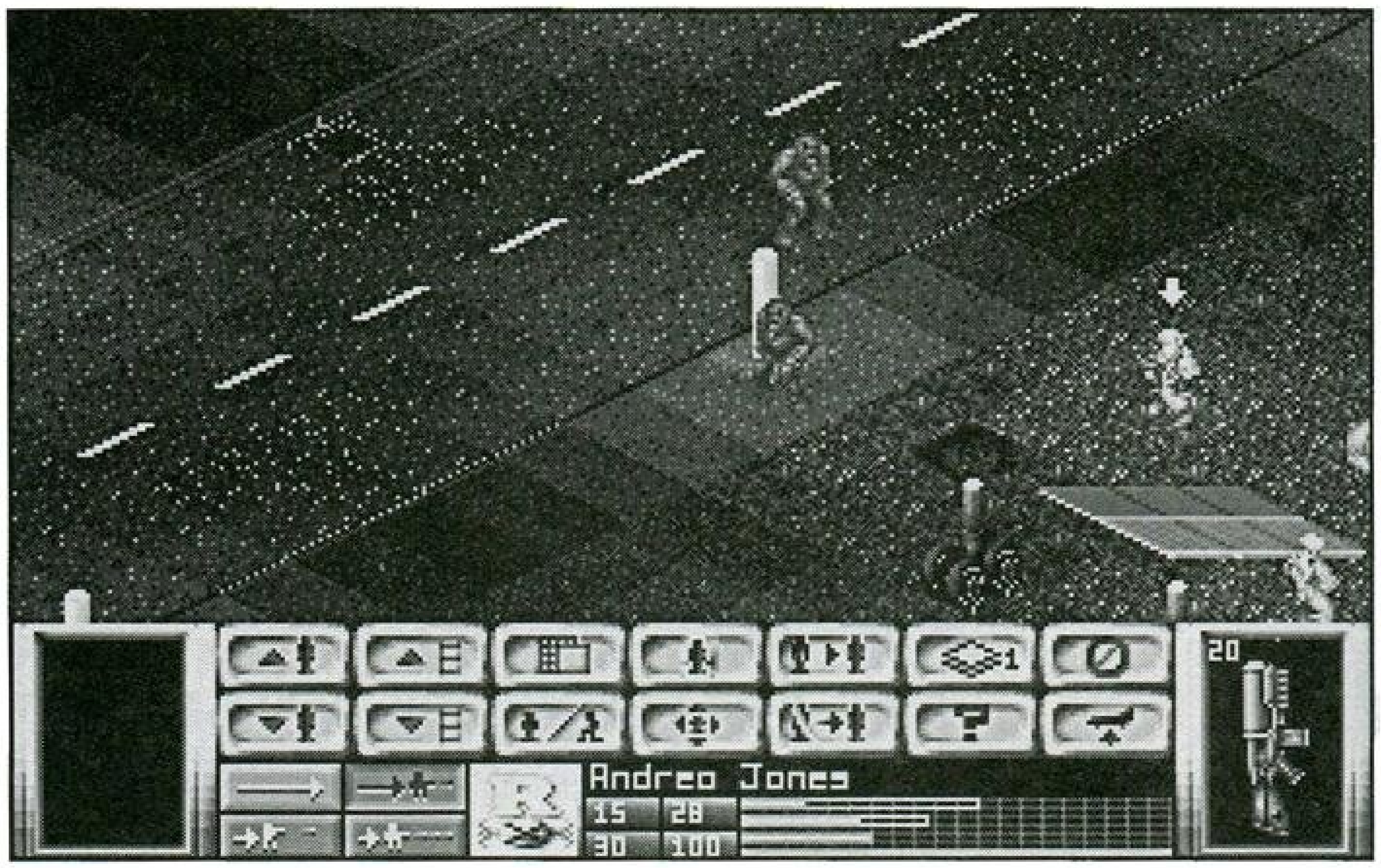


Figure 10-25
A civilian who has been turned into a Zombie.

Civilians also present a couple of other minor problems. They tend to move around frequently, and they have little or no concept of what is going on in the world around them. While a heavy firefight is raging, it is not uncommon to see a citizen run out into the middle of an open field or step out of a safe doorway to stand between an alien and an X-COM unit. And because they move during the alien-movement phase, they show up as blips when you use your motion scanner, which makes it difficult to tell whether you are tracking an alien or just some dumb civilian who can't stand still.

In addition, it is difficult in the dark to tell an alien from a civilian. A good way to find aliens is to watch the alien-movement segment closely and notice the location of any movement. That way, even if you can't see a target that might be inside a building, you can fire a few shots into a window to kill the target or draw it out. But because all moving things tend to look alike in the dark, it is easy to accidentally shoot a civilian by firing blindly. When the target is within the line of sight of a soldier, of course, the red target-number designator appears on the screen when the target is an alien.

Keeping the safety of the citizens in mind, move your soldiers across the Battlescape and keep them spread out. The best strategy for finding all aliens is to search the ground level first, making sure to look behind and between all buildings. Most aliens at a terror site tend to remain outside, and those that are inside buildings often come out to join the battle if no citizens are inside. A good way to search the area is to have one or two soldiers go to the rooftops of high buildings and search the area. From a higher vantage point, you can see more of the terrain. Hovertanks and soldiers in flying suits also make good spotters. Just remember that targets at higher altitudes tend to be more visible and, therefore, become prime targets.

If you have eliminated or stunned all the aliens that are outside, it is time to search the buildings. Most buildings have windows, which eliminates the need to enter all buildings because you can search from the outside looking in. Remember that standing in front of a window makes you a target, so be cautious. If you find it necessary to enter a building to search, make sure that you reserve TUs for at least a snap shot every turn. When you open doors and climb stairs, it is easy to forget that you are expending extra TUs: If a soldier comes face-to-face with the alien you were searching for, the soldier can do nothing but stand there and get shot.

Be extra careful when you enter warehouses and other large structures that have double-wide doorways. These buildings are excellent hiding places for large terrorist units, such as Reapers and Sectopods. They are almost always dark, so it is easy to be surprised when one of those big aliens pops out from behind a stack of crates. Send in an HWP or soldiers with heavy weapons when you search these large buildings.

Occasionally, helpful features you can use to your advantage are scattered about the terrain. Perhaps the best, and one of the most fun, is a gas station (see Figure 10-26). Catching one or more aliens off-guard in front of a gas station can be a wonderful event. When you fire at a gas pump, it usually causes the pump to explode. This action sets off a chain reaction that usually sets off all the pumps, completely destroying the front of the building and doing serious (and often fatal) damage to aliens within the blast radius. Another handy little side effect is that burning gas pumps light up the area rather well if it happens to be dark. Other explosive objects include occasional oil barrels, which can be found inside warehouses.

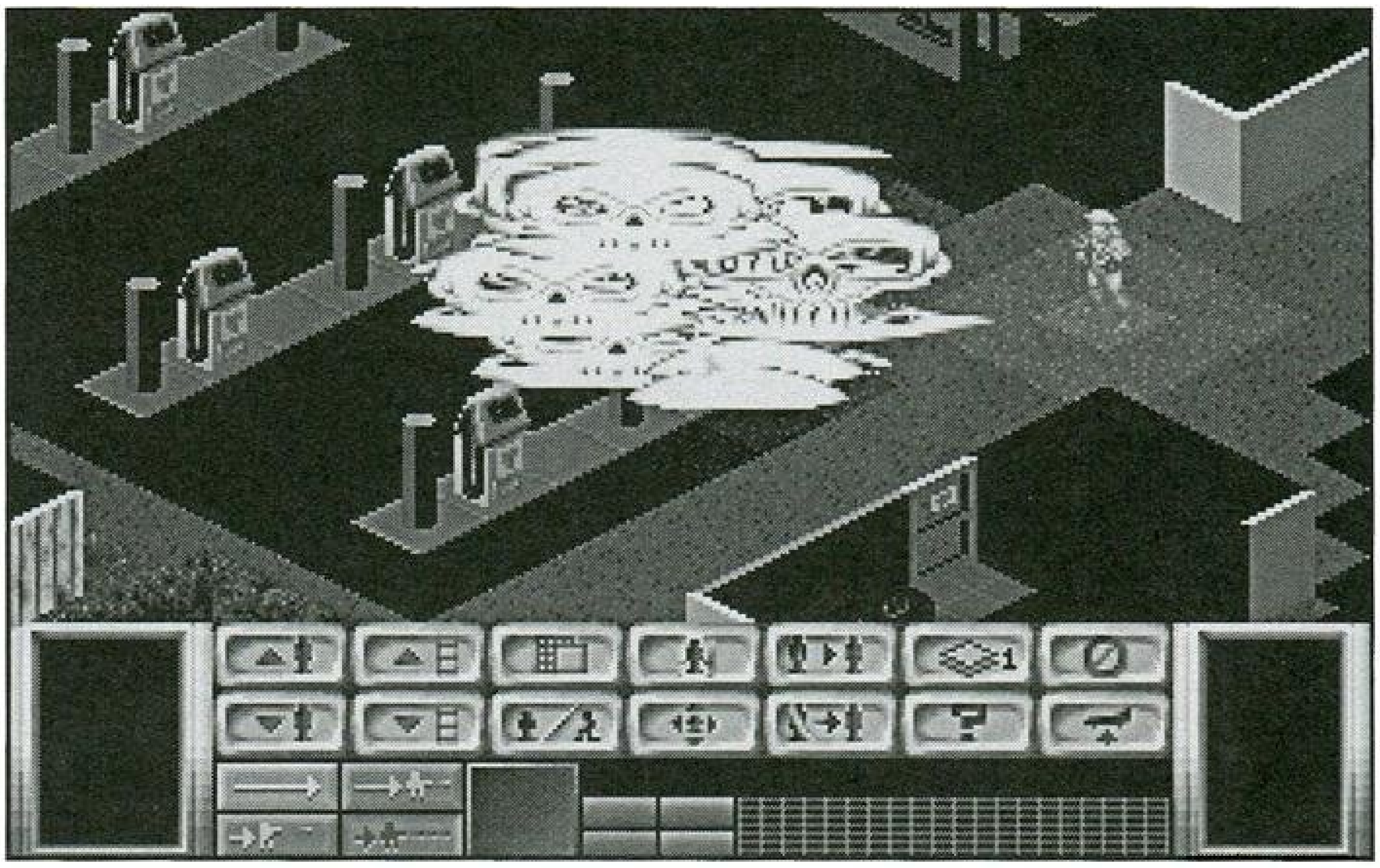


Figure 10-26
Using a gas station as a weapon.

When you're deciding how to use the terrain to your advantage, just remember that the aliens know what you know. Don't end a soldier's movement next to gas pumps or oil barrels. Even a stray shot can end up as a huge explosion.

X-COM BASE DEFENSE

This final type of ground assault strikes closest to home: It is the only one in which the aliens come to you rather than vice versa. Aliens begin searching for X-COM bases as a result of the successful interception of one or more UFOs in the vicinity of your base. When the aliens find one of your bases, they may attempt a landing there. If the base's defensive systems are unable to stop the incoming UFO, a base defense ground assault automatically begins (see Figure 10-27).

As with other ground assaults, the number and type of aliens infiltrating your base are based on the level of game difficulty you have chosen. Table 10-4 shows the number of aliens you can expect to encounter during a base defense.

Equipment Available

As in every ground assault, you begin by equipping your soldiers. In this scenario, all soldiers and HWPs assigned to the base or to any

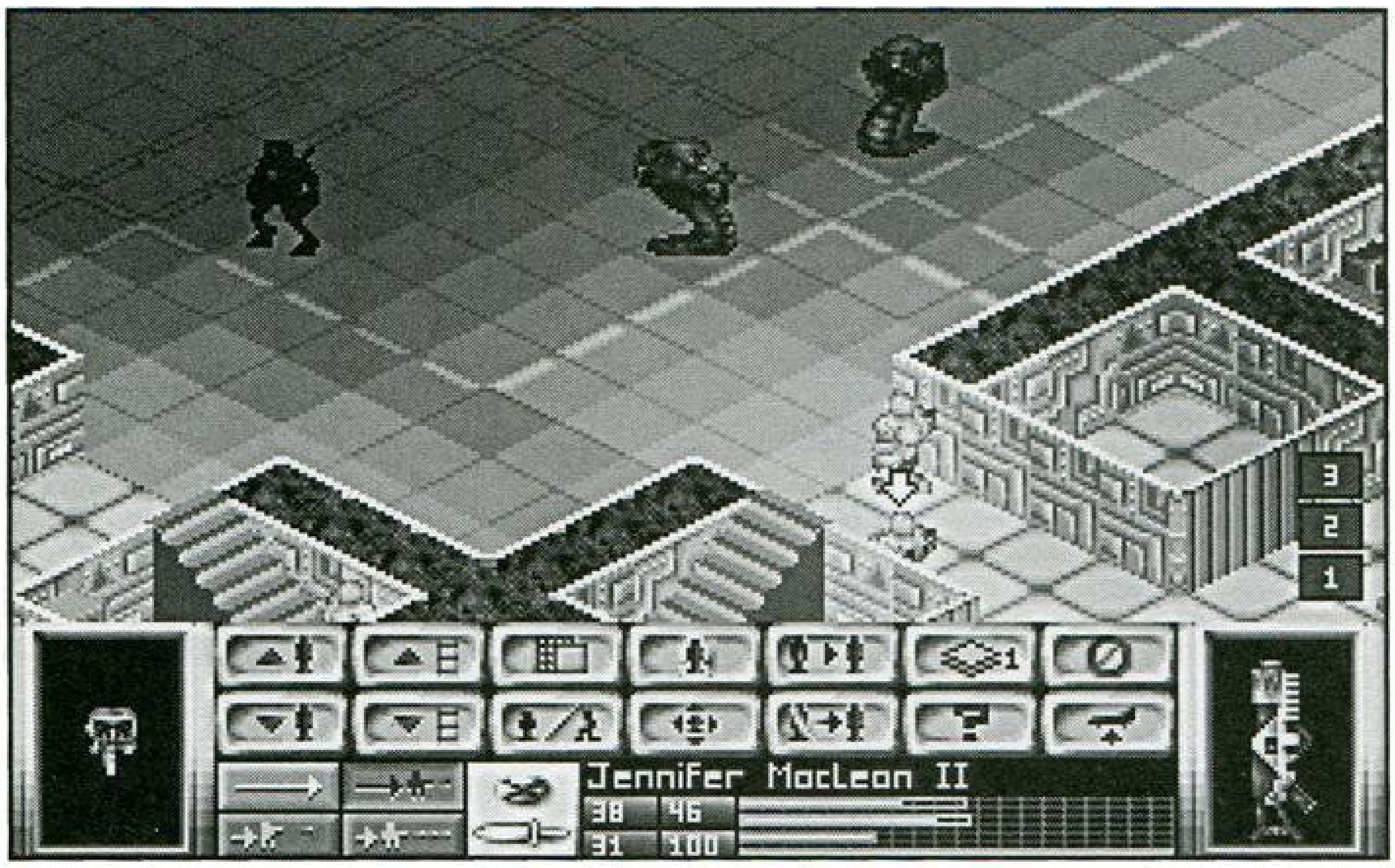


Figure 10-27
Defending an X-COM base.

Table 10-4 Alien Deployment for an X-COM Base Defense

Level	Soldiers	Navig.	Eng.	Medics	Leaders	Comm.	Terrorists
Beginner/Experienced	4-8	1	1	1	1	1	0-2
Veteran/Genius	6-10	1	1	1	2	1	2-4
Superhuman	8-12	2	2	2	3	1	4-6

transport craft currently in one of the base's hangars are available for use in the defense operation.

As for the equipment and weapons available during a base defense, only 80 pieces of equipment are available for use by your soldiers, regardless of how much equipment is stored at the base. When a base defense begins, 80 items are chosen from your inventory modules for use during the battle. The items chosen are the first 80 personnel-equipment items and weapons available at the base, including items assigned to transport craft.

This inventory is important to remember as you begin to accumulate more and more items throughout the game. When the game checks the base inventory for available items, it ignores all items except those that can be utilized by soldiers. It then begins at the top of the inventory list and chooses the items beginning at the top of the list. When a total of 80 items have been chosen, all items below that point are ignored. The following list shows the order in which the game chooses equipment:

Pistol
Pistol clip
Rifle
Rifle clip
Heavy cannon
HC AP ammo
HC HE ammo
HC I ammo

Auto-cannon
AC AP ammo
AC HE ammo
AC I ammo
Rocket launcher
Small rocket
Large rocket
Incendiary rocket
Laser pistol
Laser rifle
Heavy laser
Grenade
Smoke grenade
Proximity grenade
High explosive
Motion scanner
Medi-kit
Psi-amp
Stun rod
Electro-flare
Heavy plasma
Heavy plasma clip
Plasma rifle
Plasma rifle clip
Plasma pistol
Plasma pistol clip
Blaster launcher
Blaster bomb
Small launcher
Stun bomb
Alien grenade
Mind probe

In the case of weapons that use clips of ammunition, all weapons are automatically loaded with a clip, if available. The ammunition clips loaded in the weapons do not count against the 80-item total. Leftover clips not loaded into weapons are counted against the total. The rocket launcher, blaster launcher, and small launcher are not loaded automatically.

The following list illustrates a practical example of the equipment chosen by the game for use in a base defense:

In your general stores, you have the following weapons and equipment:

3 pistols
4 pistol clips
5 rifles
4 rifle clips
2 heavy cannons
2 HC HE ammo
1 HC I ammo
5 laser rifles
20 heavy plasma
30 heavy plasma clips
10 blaster launchers
20 blaster bombs

In an Avenger transport craft docked at the base, you have the following items:

3 medi-kits
1 motion scanner
3 pistols
5 pistol clips
2 auto cannons
1 AC HE ammo
5 laser pistols
1 heavy laser
5 plasma rifles
10 plasma rifle clips

10 heavy plasma
15 heavy plasma clips
5 blaster launchers
15 blaster bombs

In this example, the following items are available for use by your soldiers during a base defense:

3 medi-kits
1 motion scanner
6 pistols (loaded)
3 pistol clips
5 rifles (4 loaded)
2 heavy cannons (loaded with HE ammo)
1 HC I ammo
2 auto cannons (1 loaded)
5 laser pistols
5 laser rifles
1 heavy laser
5 plasma rifles (loaded)
5 plasma rifle clips
30 heavy plasma (loaded)
6 heavy plasma clips

This list is an excellent example of why you should be careful to sell weapons and equipment that are obsolete or no longer in use. Keep on hand only the items you use. There is no reason to keep pistols, rifles, and laser weapons on hand when your soldiers are using only plasma weapons. At the very least, they take up valuable storage space on a craft and at your base. And in a base defense situation, these obsolete weapons are always chosen first. In the preceding example, because of the presence of these less powerful weapons, 15 blaster launchers and 35 blaster bombs would be unavailable for use in defending your base from attack.

When you equip your soldiers, make sure that you give them, on the Equip Soldier screen, everything they need for the battle. Although all the equipment available while you are equipping the soldiers is also available during the battle, it is scattered throughout the second-floor levels of all your general-stores modules. In the heat of combat, it is next to impossible to find the objects you want and get to them in time for them to do you any good.

Defending the Base

After your soldiers have been equipped, the base defense begins. The soldiers and HWPs are scattered throughout the base, in every area except hangars and the access lift. It is a good idea to use the Battlescape control bar to cycle through your units one-by-one during a base defense rather than click on them individually. That way, if a stray soldier is in one of the upstairs rooms, you won't forget about him and leave a potentially important unit out of the battle accidentally.

When the aliens infiltrate an X-COM base, they have only two possible points of entry: the hangars and the access lift (see Figure 10-28).

If the base you are defending was built wisely, according to the general outline discussed in Chapter 3, "X-COM Bases," the defense operation should be relatively easy. On your first movement phase, move HWPs or well-armed soldiers into position to cover the corri-

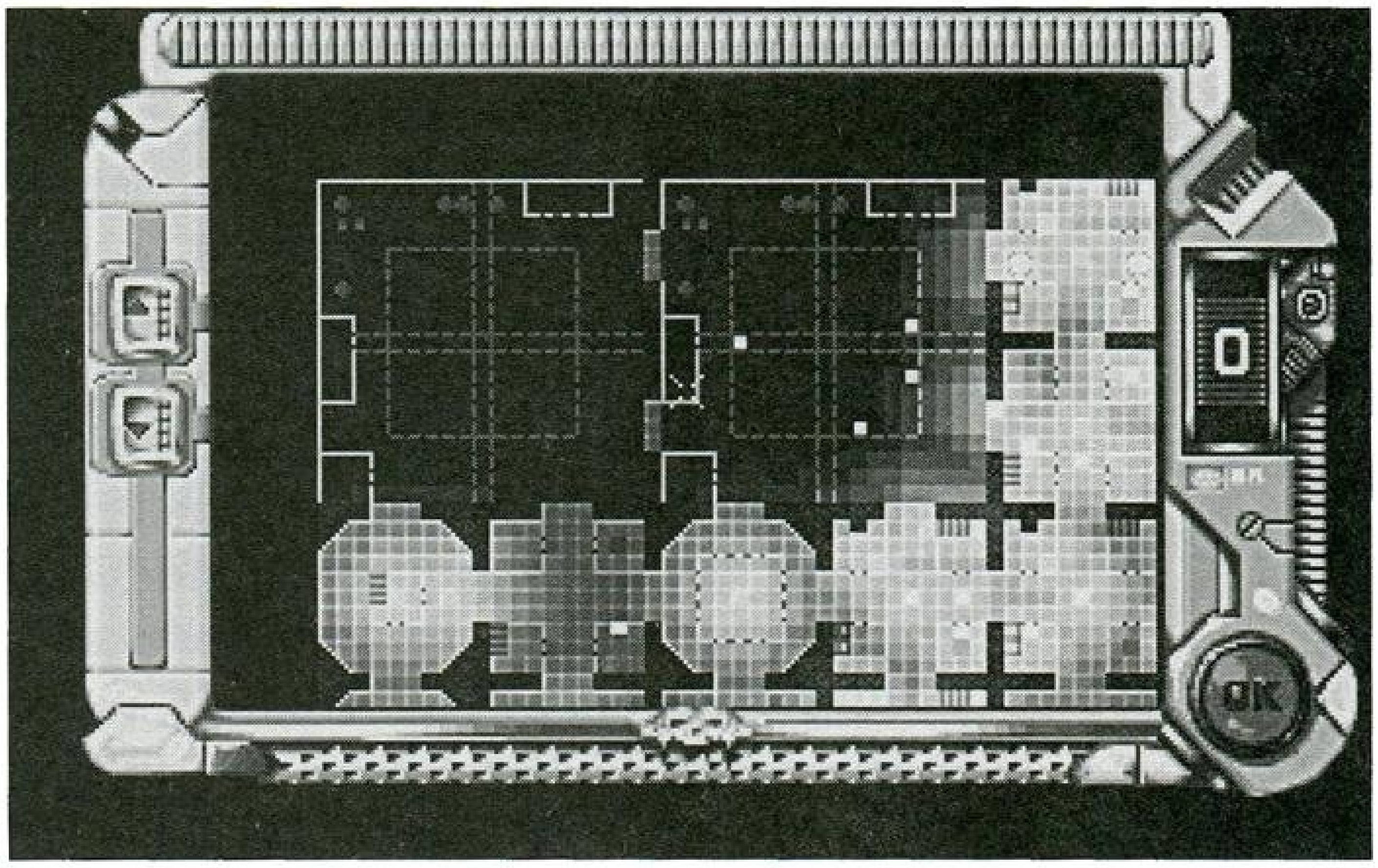


Figure 10-28
Possible entry points for aliens invading an X-COM base.

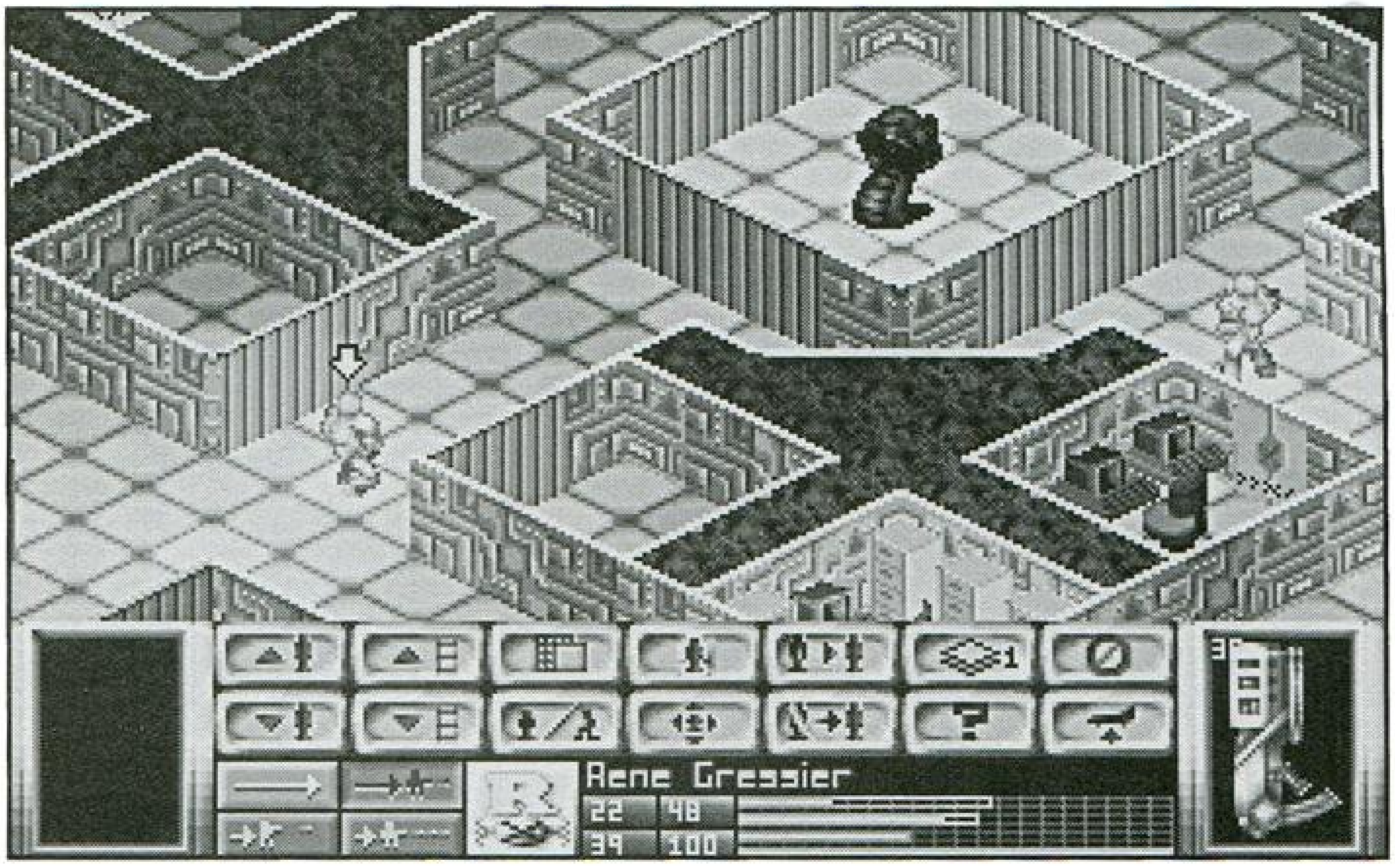


Figure 10-29
Blocking the alien's point of entry.

dor that leads to the access lift. If the base is designed well, this is the only access point the invaders can use to enter the rest of the base. Figure 10-29 shows the soldier deployment for defending a well-designed base.

While leaving units in place to block the corridor, send one or two units into the access lift to check it for aliens. Make sure that any unit entering the access lift has reserved time units for at least a snap shot. The best tactic is to move your units up to the door and wait until the next movement phase to enter the lift. That way, the units all have their TUs available in case there is trouble inside.

The access lift is a two-level structure that (strangely enough, considering that it is an elevator) has no method available for a unit to get to the upper level unless the unit is capable of flight (see Figure 10-30). For this reason, the best units to choose for clearing out the access lift are soldiers in flying suits or hovertanks. Units in capable of flight can easily become sitting ducks for alien snipers hiding on the second level. It is difficult to get a clear shot at the top level while standing on the floor below.

When you are searching the upper level of the access lift, be particularly careful to check behind the support beams in the four corners of the room. Aliens can easily hide behind them and pop out to fire a shot when you least expect it.

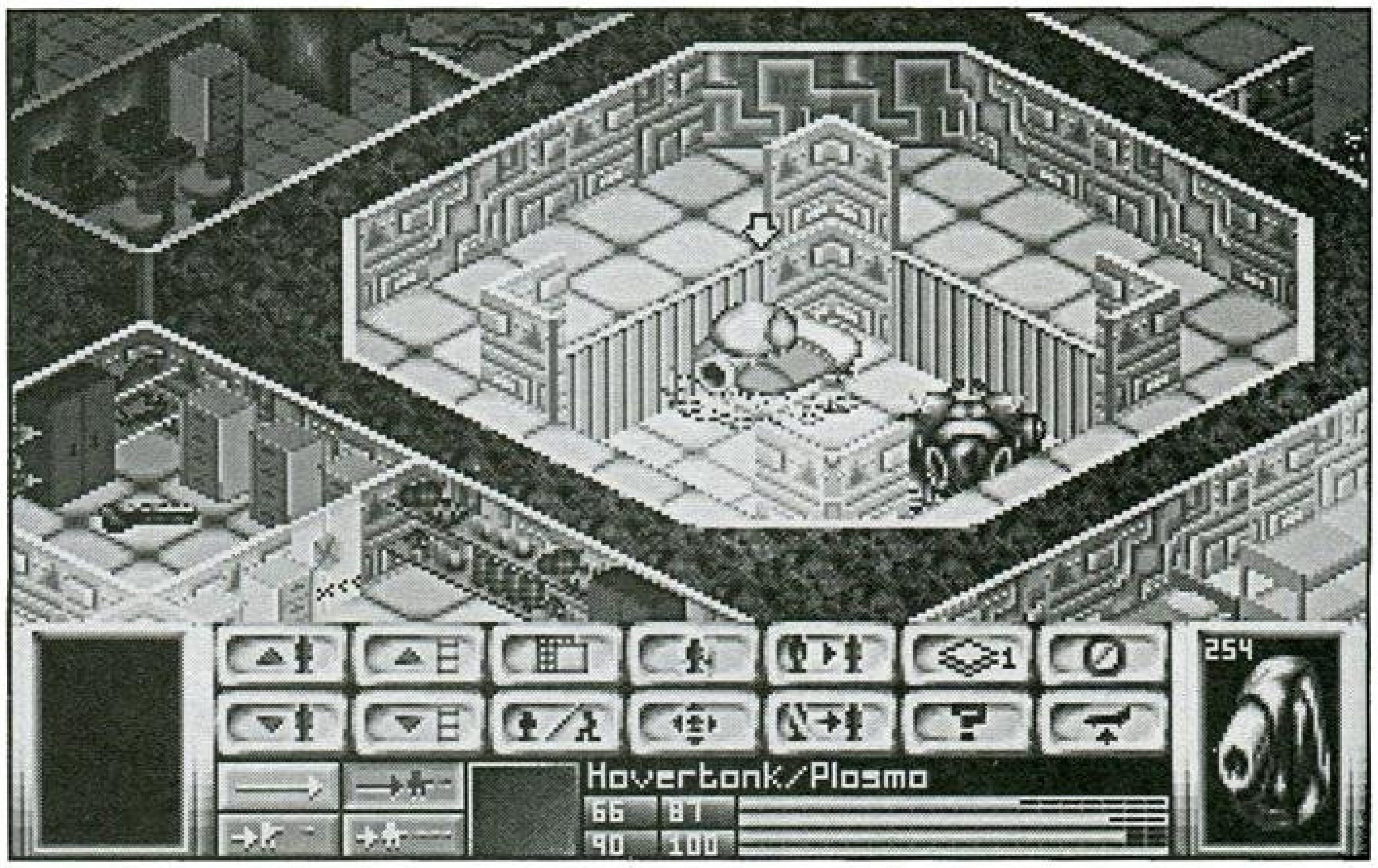


Figure 10-30
A hovertank searches for aliens in the access lift.

While the access lift is being searched, send several units toward the hangars. This access lift is where most of the alien invaders are. Station two soldiers or one HWP at the doorway of each hangar. Many of the aliens are visible from the doorway. Begin firing as soon as you see them. After all visible aliens are killed, move a soldier into each hangar to search the small rooms located around the perimeter of the room. When you perform this search, remember that although there is no upper floor, hangars are two stories tall. Be sure that you look up if the invading aliens are capable of flight.

As in a terror mission, you can use several key features of the environment to your advantage during this type of ground assault. The first is that you personally control the layout of your bases (except, to a certain extent, the first base). If the bases are laid out in a logical manner, your soldiers have a distinct home-field advantage. If the aliens are forced to funnel through a single corridor to get from their entry point to the rest of the base, with a little patience you can essentially just wait for the aliens to make a move and then blast them as they try to come through that single corridor.

The most important environmental factor, no matter how your base is designed, is that X-COM bases are indestructible. No matter what kind of damage you do to the base facilities during a base defense, the base continues to operate at 100 percent efficiency

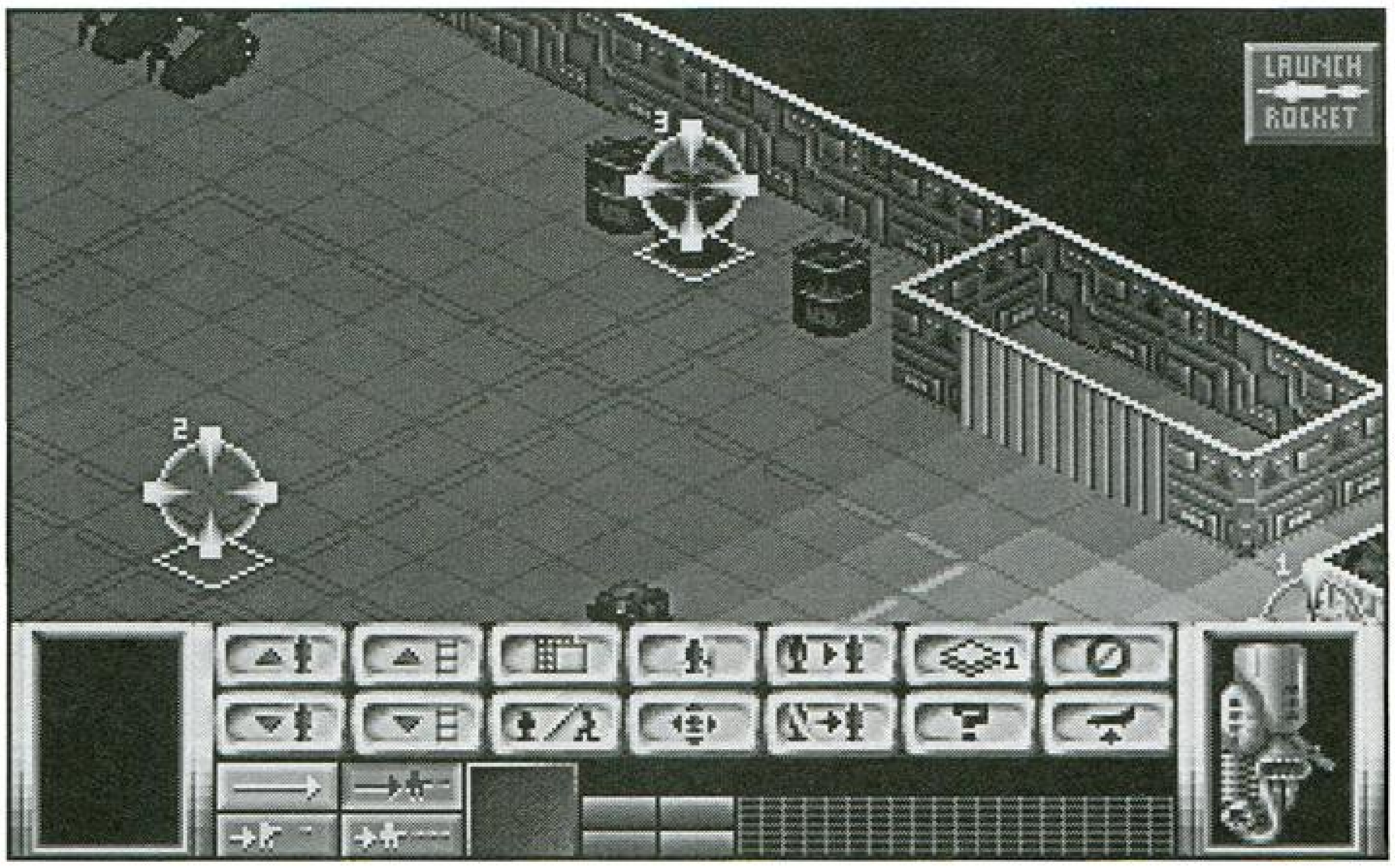


Figure 10-31
Preparing to clear a hangar the easy way.

after the defense is complete. You have a fast and easy way, therefore, to clear the hangars of pesky aliens.

When you examine a hangar on the Battlescape, notice that oil barrels are lined up along two of the walls (remember what oil barrels do when you shoot them?). The hangars are ready-made for explosive chain reactions. Choose a good high-explosive weapon, and give one to several of your soldiers. The finest choice available is the blaster launcher: It fires guided missiles and packs the biggest explosion of any weapon in the game. Fire a shot into the second oil barrel along the wall, as shown in Figure 10-31.

When the shot hits, the resulting explosion sets off a series of smaller explosions that spread destruction over more than half the hangar. Figure 10-32 shows the aftermath of a blaster launcher shot used to clear a hangar.

The amount of destruction left behind is large, but the number of aliens left behind is usually few. Aliens hiding inside the small maintenance buildings and on the opposite side of the hangar from the oil drums usually survive, but it is much safer after the explosion to enter the hangar and pick them off one by one.

The beauty of this plan is that you can clear the entire base of aliens by simply blasting the base to bits. When the invaders have been neutralized, the base remains fully functional. The only flaw in

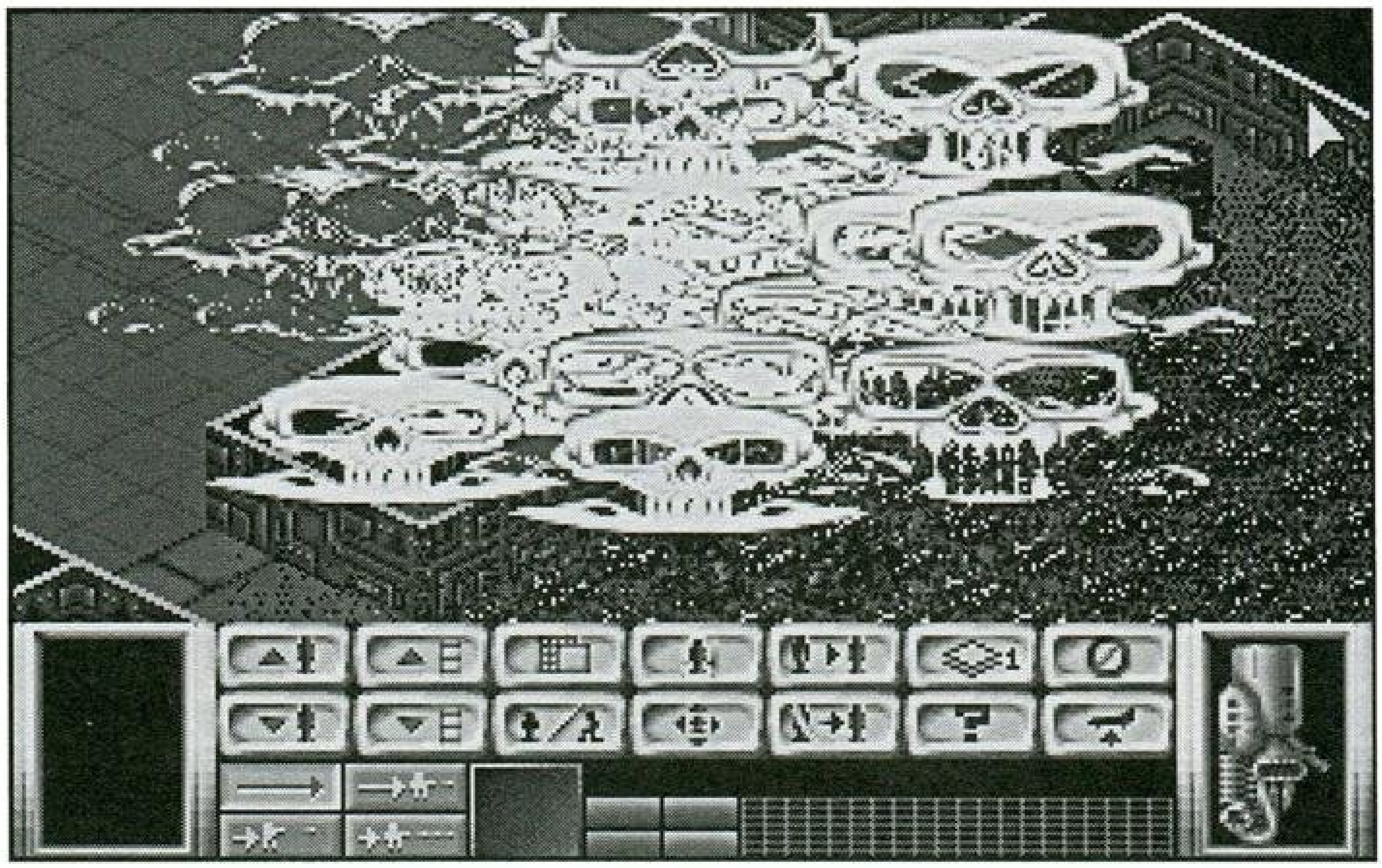


Figure 10-32
A blaster launcher takes out several aliens hiding in an X-COM hangar.

this strategy is that equipment and weapons are destroyed if they are within the radius of the explosion. Just be careful not to blast any rooms containing equipment you need, such as the upper levels of general-stores modules.

The most important thing in the base defense scenario is not to allow aliens to get outside the hangars and the access lift and into the base beyond them. When this happens, you are invariably left to search every room of the base to see where the last alien is hiding. In a big base, this can be a large area to cover, and X-COM base structures have lots of hiding places. While you are conducting this extensive search, the alien (if it is capable of psionic attacks) can be mind-controlling some of your soldiers and using them to kill the others or causing your people to panic. The longer the situation progresses, the lower the soldiers' morale becomes, making it difficult to continue the search. This situation can usually be prevented if you send units to all hangars and the access lift promptly at the beginning of the battle.

A final word about base defense: Don't quit. Unlike other types of ground assaults, the dust-off option does not mean that some of your soldiers "get away and live to fight another day." When you dust off from a base defense, no one at the base survives. The base and all its accompanying craft, equipment, and personnel are lost to the aliens. Dusting off should never even enter your mind as a consideration in this type of ground assault. Just make sure that you save the game before the battle begins, and then just go back to that save and start over if things go wrong. Giving up a base to the aliens is a costly endeavor.

THE FINAL ASSAULT

The biggest and most important ground assault is the invasion and destruction of the aliens' base on Mars, Cydonia. Because this ground assault is the most important and most involved in the game, Chapter 11, "Mastering Cydonia—The Final Assault," is devoted entirely to this battle.

THE SPOILS OF WAR

In addition to saving the people of the world from the aliens and achieving fame and funding from the grateful nations of the world, ground assaults provide some other, very tangible benefits in the form of equipment, artifacts, weapons, and captured aliens.

The following items all can be obtained from the sites of ground assaults. Some of the equipment, such as the weapons, have been described elsewhere in this book. Items not previously described are followed by a complete description here. Except where otherwise noted, you have a chance of finding quantities of any or all of these objects at the site of any type of ground assault:

Weapons and ammunition
Plasma pistol and plasma pistol clip
Plasma rifle and plasma rifle clip
Heavy plasma and heavy plasma clip
Blaster launcher and blaster bomb
Small launcher and stun bomb
Alien grenade
Other equipment:
Mind probe
UFO components and alien artifacts:
Alien alloys

Alien craft are constructed from a lightweight but durable alloy molded through electromagnetic manipulation. After this alloy is studied by X-COM scientists, it can be easily reproduced by using components and technology available on Earth. This material can be used in the construction of many items, including personal body armor, heavy-weapons platforms, and spacecraft.

Alien alloys may be found at any type of ground assault except in an X-COM base defense.

ALIEN ENTERTAINMENT

X-COM scientists hypothesize that the clusters of colored spheres inside alien habitats are some form of entertainment device. The spheres contain psionic transmission circuitry designed to produce a signal that directly stimulates the pleasure centers of the brain. This signal produces a hallucinogenic effect not unlike that of synthetic chemical hallucinogens. These structures are the only evidence that the alien life-forms participate in any form of recreation.

Alien entertainment can be found in alien bases and in larger UFOs.

ALIEN FOOD

Alien habitats often sport several large containers filled with highly corrosive enzymes capable of "digesting" a variety of Terran animals (including humans) as food for various alien species. The mixture of digested proteins and liquefied enzymes is absorbed directly into the bloodstream of the aliens. These containers, along with the long-documented proof of animal mutilations and abduction of humans by UFOs, suggest that the aliens have a symbiotic dependence on Earth creatures as food.

Alien food can be found in alien bases and in most UFOs.

ALIEN SURGERY

Alien surgery consists of a number of surgical lasers mounted on an examination table. The lasers are used by alien medics to extract vital organs from cattle and other Earth animals, for food or genetic experimentation. The evidence provided by these surgical setups may explain the widespread reports of livestock mutilation in association with UFO sightings.

Alien surgery can be found in alien bases and in some UFOs.

ELERIUM-115

Elerium-115 is an element of alien origin that, when bombarded by certain forms of particle energy, produces an antimatter reaction that in turn creates gravity waves and other forms of energy. This element is the cornerstone of all alien technology. Every piece of alien equipment, from the largest base computer to the smallest plasma weapon, depends on Elerium-115 as a power source. A versatile element, Elerium-115 acts as fuel for spaceships and reactive matter for alien explosives.

Because Elerium-115 is such an integral part of alien technology, it stands to reason that it eventually becomes important to you as well. Elerium-115 becomes especially important when you begin to use advanced intercept and transport craft that utilize this element for fuel.

These reasons alone would make Elerium-115 a much-sought-after item. But the thing that makes it much more valuable is its scarcity. Elerium-115 does not occur naturally on Earth; it cannot be synthesized by any known means. It must therefore be obtained from the sites of ground assaults.

Elerium-115 is obtained from UFO power sources, which are found in alien bases and in all UFOs. Each power source captured from a ground assault site yields 50 units of Elerium-115. Because there is a 70 percent chance that each UFO power source will explode if a UFO crash-lands, UFO assaults and alien base assaults are the best sources for Elerium-115. No Elerium-115 is obtained as a result of an X-COM base defense.

UFO NAVIGATION

Alien craft use a navigation system based on a complex network of optical processors. The alien navigator is linked directly into the system and controls the emissions of gravity waves produced by the UFO power source to move and steer the craft. The system can be modified to be usable by humans.

X-COM engineers can easily reproduce UFO navigation units, by using alien alloys and other materials. The production of UFO navigation is seldom necessary, however, because many units are captured over the course of the game as a result of successful ground assault missions.

UFO navigation can be found aboard any UFO. It cannot be found at an alien base or as a result of an X-COM base defense.

UFO POWER SOURCE

At the heart of every alien craft is one or more UFO power source. These reactor units use Elerium-115 to produce a matter-antimatter reaction that generates gravity waves and other forms of energy. Far more advanced than any power source previously known to Terran science, the UFO power source produces energy with almost no heat or other energy loss. Its efficiency level is estimated to be approximately 99 percent. Because of this efficiency, relatively small amounts of Elerium-115 are needed to produce a reaction.

After the UFO power source is studied by X-COM scientists, it can be easily reproduced. Like UFO navigation units, however, enough UFO power sources can usually be obtained from ground assault sites to avoid the need to build many of them throughout the course of the game. UFO power sources are necessary in order to produce any type of advanced intercept and transport craft.

UFO power sources can be obtained from any UFO or alien base. Because UFO power sources have a 70 percent chance of being destroyed in a crash landing, the best place to find them is in intact UFOs and bases. When you fire weapons near a UFO power source, be careful not to hit the power source with a stray shot. Because of the high-energy reactions UFO power sources produce, the reactors tend to be extremely explosive. Shooting a UFO power source can be a fine method of killing a roomful of aliens, but it also can lead to dead X-COM soldiers and definitely to lost Elerium.

Table 10-5 shows the amount of alien alloys and Elerium-115 that can be obtained from UFOs and bases that are captured fully intact.

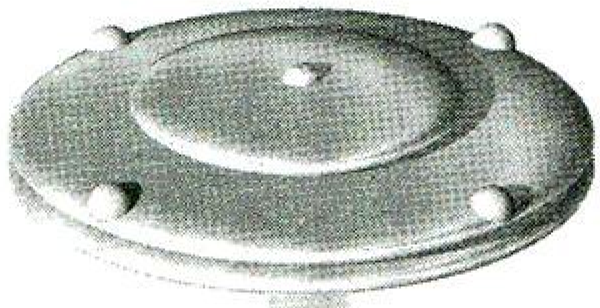
Table 10-5 Maximum Amount of Alien Alloys and Elerium Found in UFOs and Alien Bases.

UFO Type	Alien Alloys	Elerium-115
Small Scout	1	0
Medium Scout	11	50
Large Scout	35	50
Harvester	97	100
Abductor	70	100
Terror Ship	92	100
Battleship	231	200
Supply Ship	141	150
Alien Base	*	200

*Varies depending on base layout

Damage inflicted on the base or UFO may subtract from the values shown in the table.

In addition to the equipment and artifacts that can be obtained, you return to your base with any unconscious aliens as captives, and the corpses of all dead aliens at the ground assault site. The study of the aliens and their corpses leads to valuable knowledge regarding alien physiology and alien activity on Earth.



Chapter Eleven

Mastering Cydonia—The Final Assualt

Is you progress through the game, you gain more and more information regarding the origins of the aliens and the purpose of their mission on Earth. As you do, it becomes increasingly clear that the answer to the growing alien threat does not lie on Earth itself, but in outer space, at the alien's point of origin.

Continued interrogation of living aliens, especially alien leaders and commanders, gives you the information you need to pinpoint the location of the alien base of operations. Although you may never find out where the aliens originally came from, you do obtain enough information to find out that their base of operations in this part of the galaxy is an outpost on Mars—an alien command base known as Cydonia. And, in order to stop the alien threat once and for all, you must take a force of X-COM soldiers to Cydonia and cut off the aliens at their source.

The mission to Cydonia is the final ground assault mission of the game, and it is certainly the most important battle X-COM must fight. If this battle is won, you win the game. If it is lost, the Earth is overrun by the alien forces you have been unable to defeat.

This chapter takes you through the entire battle and provides hints and strategies for achieving your objectives as quickly and successfully as possible.

GETTING TO MARS

A number of minimum prerequisites are required in order to begin the Final Assault. Most of these prerequisites involve topics of research that must be completed before gaining knowledge of the location of the Cydonia base. The other prerequisite is based on available X-COM craft.

NECESSARY RESEARCH TOPICS

The research required to reach Cydonia has nothing to do with technology. The necessary research deals with finding the location of the hidden alien base. After you have played the game once (or after you have read this book), you already know, of course, where the base is—on Mars! Nevertheless, every time you begin a new game, your scientists must go through the paces of researching the correct topics in order to find out where the aliens are hiding their main base.

This information is available only through the interrogation of live aliens. It is absolutely essential to capture as many aliens as you can and store them in alien-containment facilities until you have had a chance to interrogate them. Especially important are the alien leaders and commanders. Although other aliens give you information about their species, bases, UFOs, and technology, only interrogation of the highest-ranking aliens provides information about their base on Mars.

The following topics must be researched, in order, before you can make the trip to Cydonia:

1. Alien origins
2. Alien harvest
3. The Martian solution
4. Cydonia or Bust

The order listed here is the only order in which you can research these topics. The first two, alien origins and alien harvest, are revealed as a result of your first two interrogations with live aliens of any rank. The last two, the Martian Solution and Cydonia or Bust, come as a result of the interrogation of alien leaders or commanders following the research of the first two topics. The high-ranking aliens that must be interrogated for the final two topics can be found only aboard alien battleships and inside alien bases.

After these four topics have been researched, X-COM has discovered the location of the Cydonia base and is ready to start equipping itself for the Final Assault.

THE AVENGER

While your scientists are in the process of interrogating aliens to discover the location of the main base, your engineers should be working hard as well. One manufactured item is required in order to make the trip to Cydonia: the Avenger transport craft. This is the only craft capable of deep-space travel, so you must have one in order to transport your combat team to Mars.

PACKING FOR THE FINAL ASSAULT

When you're equipping your Avenger for the Final Assault, it is important to choose carefully your equipment and weapons. The craft itself does not have to be armed—you are not required to fight any air-to-air battles on your way to Mars. But after the craft is built, begin to stock up for the mission.

The following list is a recommended load-out for the Cydonia mission:

Two HWPs: As always, the HWPs are useful as powerful vehicles to scout the terrain ahead of your soldiers and absorb shots from hidden aliens that may be covering the ramp of the landing craft.

The Avenger has room to carry as many as four HWPs; each one takes up four spaces in the craft. You can choose to bring the maximum number of HWPs; after you enter the second portion of the battle, however, you will find that four soldiers are much more versatile and useful than one HWP when you're moving and fighting in the narrow corridors and chambers within the base.

Weapons for each soldier: Choosing weapons for your soldiers is a purely personal consideration, and everyone has an opinion about what works best. I recommend loading enough heavy plasma guns on-board for each of the soldiers. The heavy plasma, as stated elsewhere in this strategy guide, is a cost-effective (usually free) and powerful weapon. You have to take only enough clips to load each of the guns; most of the aliens you encounter on Mars also use heavy plasma guns, and you can just take their spare clips after you kill them.

Some players may prefer the lighter plasma rifles. Still other players may prefer laser rifles for their speed and because they require no clips. Whichever weapon you choose, just make sure that you pack one for every soldier.

Heavy Weapons: You get no points for finesse in the Final Assault. The point of this mission is to destroy every alien in sight and make your way to the alien leader inside the base. One of the fastest and easiest ways to accomplish this task is to blow up everything in sight.

To accomplish this task, take along three or four blaster launchers and plenty of blaster bombs. If, for some reason, you don't have the technology or resources to get these weapons, take several rocket launchers and large rockets instead. Because of its capability to fire guided missiles, the blaster launcher should always be your first choice here.

Grenades: For the same reason you take along heavy weapons, take some grenades along too. The best choice are alien grenades, if you have access to them. They don't make nearly the bang that heavy weapons do, but they still do a nice job of clearing out a room.

Medi-Kits: Take not just one or two medi-kits, but one for each of your soldiers. This advice may seem a little excessive, but it can mean the difference between success and failure. When the fighting gets hot and heavy, you may not have time to get a designated "medic" to an injured soldier in time to save him from dying. But if all soldiers have a medi-kit, they can heal themselves in case of injury.

Psi-Amps: On the Final Assault, you are best served if you bring along soldiers who have high ratings in both psionic strength and psionic skill. In both segments of the Final Assault, aliens can launch psionic attacks. It never hurts to fight fire with fire or use "mind over mind," as it were. Just be aware that the aliens you are fighting here are among the best, and they tend to be resistant to psionic attacks.

Motion Scanners. Bring one or two along—it's always nice to know where the enemy is in advance.

Electro-Flares. Take one for every soldier in your expedition. No matter what time of day you launch your assault on Mars, the surface of the planet will be dark. It will also be crawling with aliens who are hiding in the dark and just waiting to shoot at you. Throwing a few electro-flares into the gloom evens the odds a bit.

CHOOSING YOUR SOLDIERS

Choosing the best possible crew for the Final Assault is just as important as selecting the proper equipment. Even having all the best equipment you can build or buy doesn't mean anything if the soldiers are all dead before you can even enter the Cydonia base.

Choose soldiers with a great deal of experience. As the game progresses, the ability scores of your soldiers steadily rise. Soldiers who have been with you the longest are generally the most experienced and have the highest ability scores. When you are rating the ability of your soldiers, make sure that you examine their ability scores on the Character Information screen. Don't go by rank alone! Remember: A soldier's rank depends more on the number of soldiers you have than on experience.

When you examine the ability scores of your soldiers, make sure that you check each soldier's psionic strength characteristic. It is important that this statistic be reasonably high—at least 30, preferably more. As stated, psionic attacks are commonplace during this mission. The last thing you need is a veteran soldier who is a crack shot but who falls victim to alien mind control almost every time he's targeted. This situation makes that veteran not only useless to you but also a serious threat! The same soldier who was taking out Sectoids at 100 yards in one turn can easily plug away at his own companions the next turn.

If you must bring along soldiers with low psionic ratings, make sure that you arm them with rifle- and pistol-type weapons (laser rifles, plasma pistols, heavy plasma) as opposed to area-effect weapons (grenades, rocket launchers, blaster launchers). That way, if they do go berserk or fall victim to alien control, they end up doing the least amount of damage possible.

There is some room for a few rookies on the Final Assault. They do have their uses (heartless though most of them are) in the greater scheme of things. In some situations, it's nice to have a rookie to "walk point" and act as a sacrificial lamb to reveal the positions of hidden aliens or to draw fire while your veterans move toward their objectives. Yes, rookies have their uses, but make sure that the bulk of your Final Assault team is made up of seasoned combat veterans.

GETTING THERE

After you have acquired all the requisite knowledge and have built an Avenger transport, you may leave for Cydonia. When you have all the requirements and your ship is loaded, click the Intercept button on the Geoscape screen. When the list of available ships appears, choose the Avenger you want to use by clicking it. This step brings up the normal Intercept dialog box with an extra option, as shown in Figure 11-1.

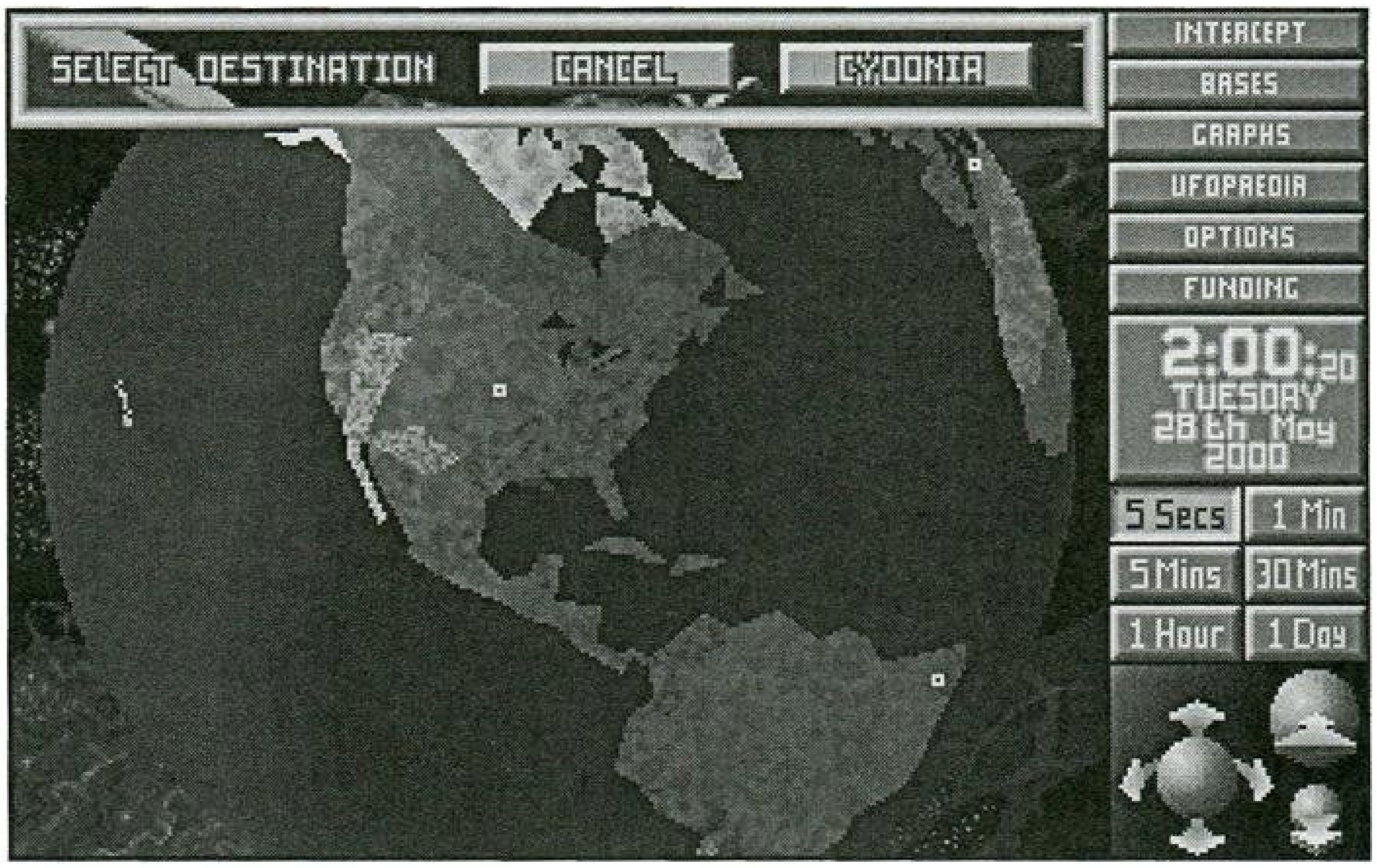

SELECT DESTINATION
CANCEL
CYDONIA
INTERCEPT
BASES
GRAPHS
UFOPAEDIA
OPTIONS
FUNDING
2:00:20
TUESDAY
28th May
2000
5 Secs
1 Min
5 Mins
30 Mins
1 Hour
1 Day

Figure 11-1
The Intercept dialog box for launching the Final Assault.

To launch the Final Assault mission, click the Cydonia button.

Be sure to save your game before embarking on the Final Mission! After you reach Mars, there is no turning back for reinforcements, and the Final Assault begins immediately after you click the Cydonia button. After you're there, you must either win the battle or lose the entire game and start over from a saved game.

FIGHTING THE FINAL ASSAULT

The Final Assault takes place in two separate stages. The first stage is an outdoor battle on the surface of Mars. After this stage is complete, an entire second battle must be fought, this one inside the alien base.

When you first arrive on Mars, you are given the opportunity to arm and equip your soldiers, just as you are in all ground assaults. After you have completed this task, click the OK button to begin the first segment of the Final Assault.

BATTLE ONE: OUTSIDE

Alien Deployment

The number and rank of aliens you must face during the first battle on the Martian surface is determined, just as in other ground assault missions, by the level of game-play difficulty you have chosen. The two things that differ in the battles on Mars are that the alien races are always the same and that the number of each rank is a constant, rather than a random, number.

In the Martian surface battle, the first of the two segments of the Final Assault, the aliens populating the surface are always Sectoids and Cyberdiscs. The number and rank of the aliens for each game's difficulty level is shown in Table 11-1.

Terrain and Tactics

The first battle begins in the same manner as all outdoor ground assault missions: with all your soldiers and HWPs inside the landing craft with a limited view of the surface, as shown in Figure 11-2.

Table 11-1 Alien Deployment for the First Mars Battle

Alien	Difficulty Level		
	Beginner/ Experienced	Veteran/ Genius	Superhuman
Sectoid Soldiers	4	5	6
Sectoid Leaders	3	4	5
Sectoid Commanders	3	4	5
Cyberdiscs	2	3	4

The first thing you can see is that most of the surrounding area is covered in darkness. This is true no matter when you launch your mission. By this point in the game, you should already be very cautious when you have your units exit from the landing craft, especially in the dark. You should trust your cautious nature, especially in the Final Assault. It is rare, even on the easiest level of the game, for at least one alien not to be hiding in a position where it can get a clear shot at units coming down the Avenger's ramp. Therefore, caution is your best tactic in this situation.

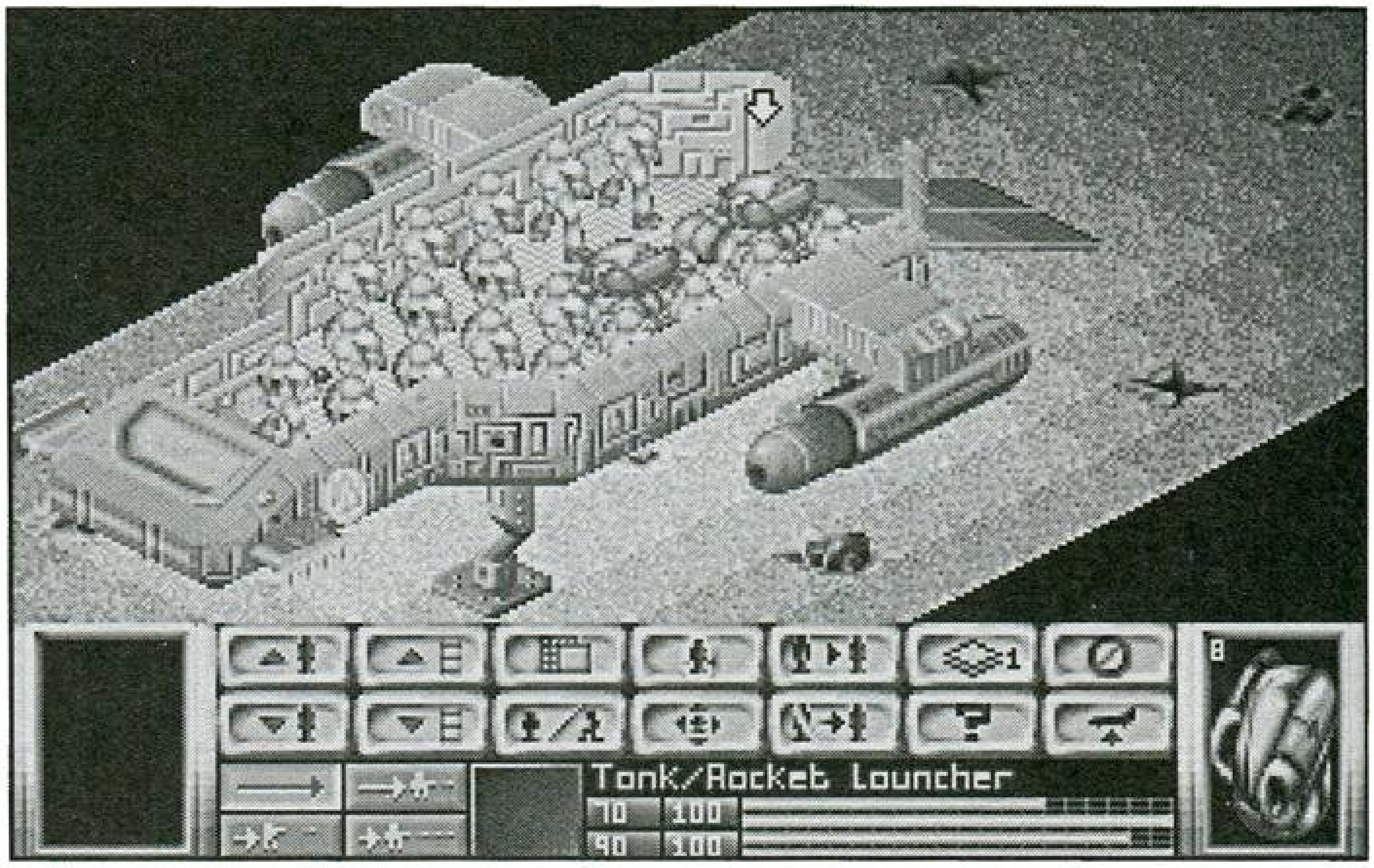


Figure 11-2
About to embark on the Martian landscape.

Save the game before moving any units. This step is more important here than in any other ground assault, because you can't live to fight another day if you fail in the Final Assault.

Use the same tactics as before: Move the HWPs out first, and have them rotate to view as much of the surrounding area as possible while reserving enough TUs for a snap shot. This technique should at least reveal the general direction of one or more nearby snipers and give you a better view of the surrounding terrain. Then, as in other missions, begin moving the soldiers out of the Avenger, trying not to bunch them together too closely. It is always dangerous to leave most of your squadron packed inside the landing craft; but on this particular mission, with all the high-explosives and mind control going around, it is important to break up the squadron into smaller groups or individuals as quickly as possible.

The terrain of Mars consists of a mixture of rock piles and craters, as shown in Figure 11-3.

These features can work both for you and against you. On the plus side, they provide your units with places to hide and crouch to avoid enemy fire. On the minus side, they provide aliens with places to hide and crouch to avoid enemy fire. Another equally balanced benefit-burden is that long-range shots are virtually impossible from ground level because a clear line of fire over long distances is

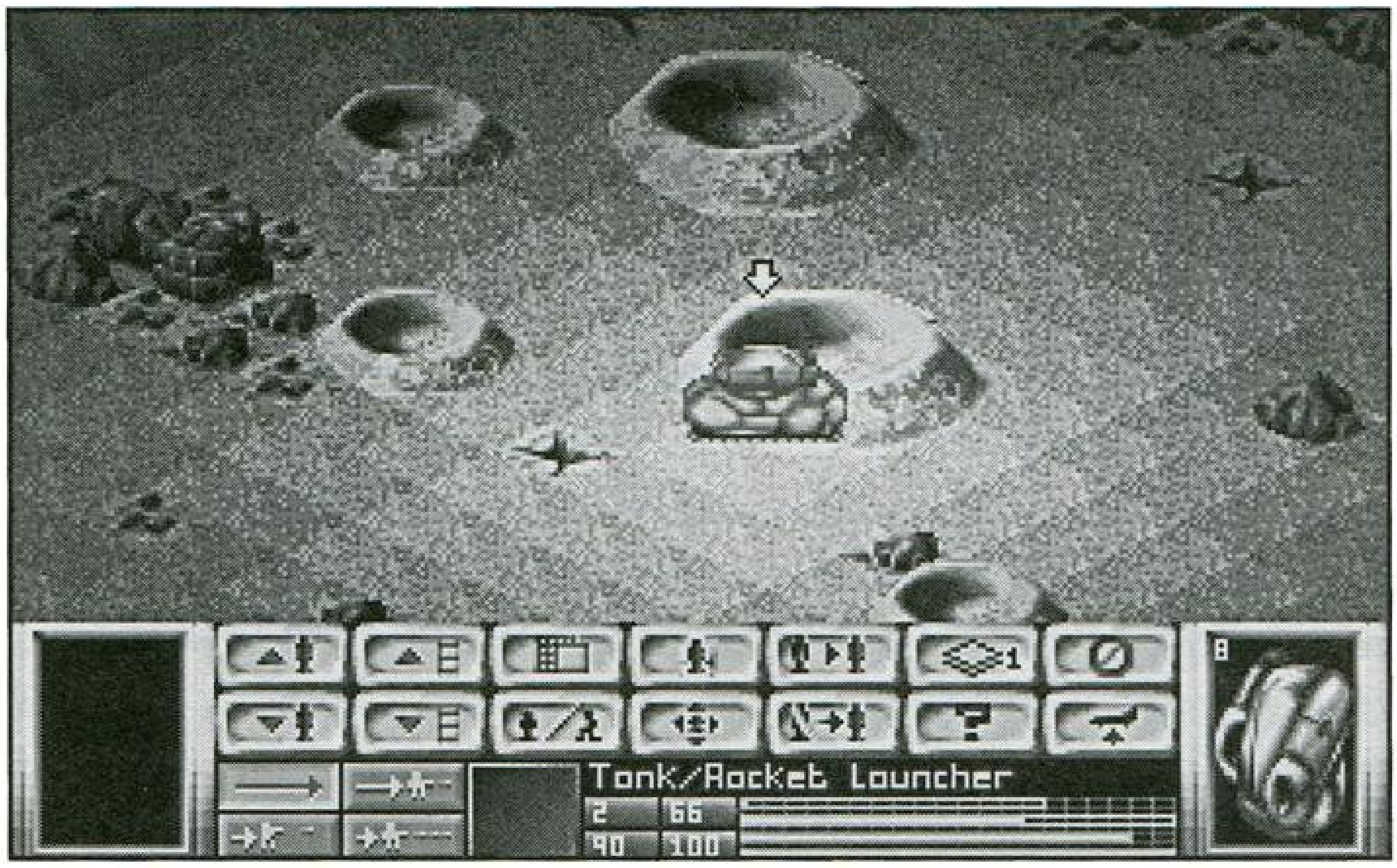


Figure 11-3
The surface features of Mars.

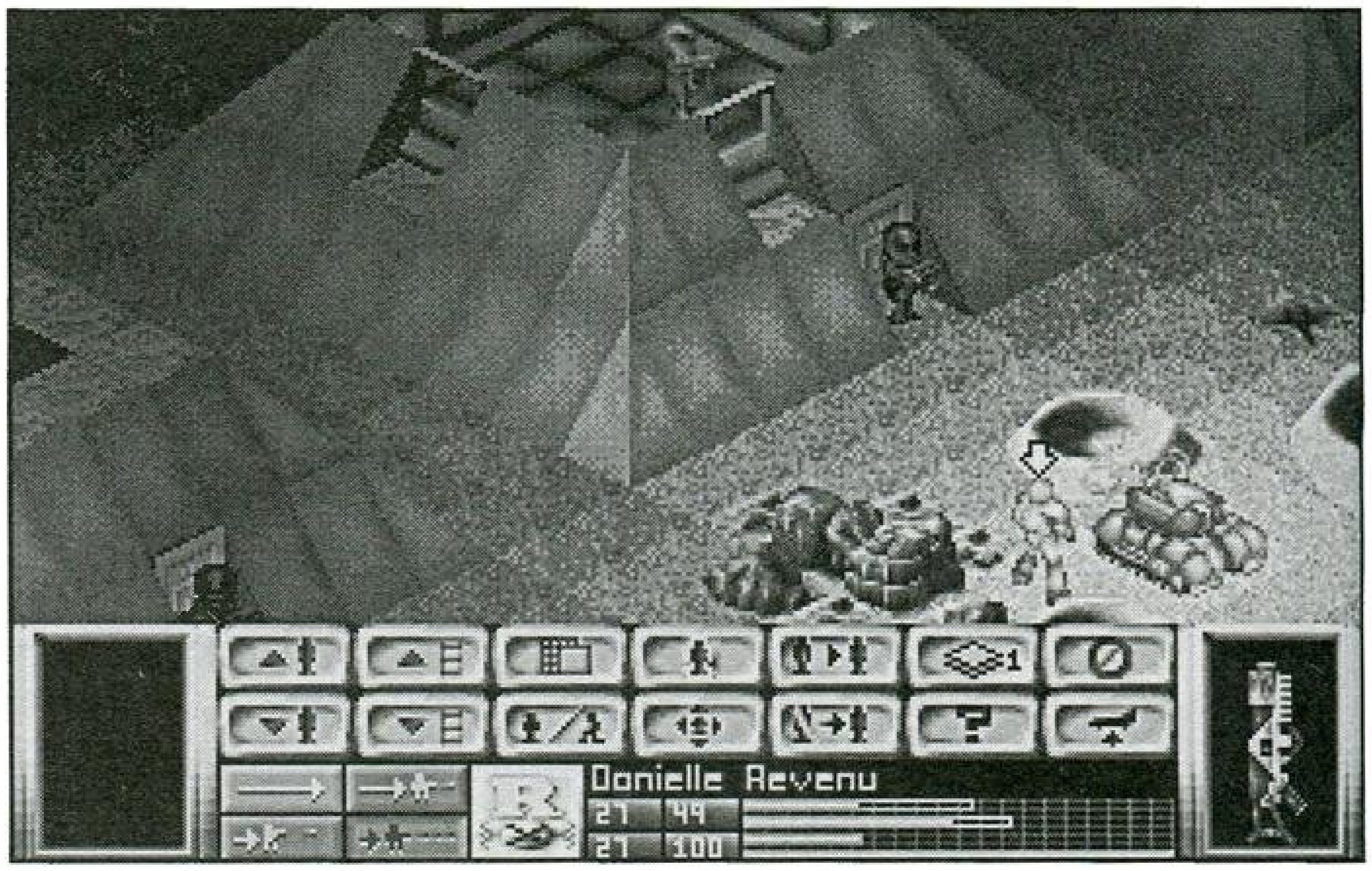


Figure 11-4
A Sectoid sniper takes aim at unsuspecting X-COM soldiers.

nearly impossible to achieve. This situation makes it equally difficult for X-COM troops and aliens to fire at one another if they possess no flight capability.

The Sectoids here do have one rather effective method of overcoming the terrain disadvantage. In addition to the natural surface features of the Mars Battlescape, a number of pyramid-shaped buildings are scattered around the area. These buildings are the control centers and guard stations for the main base. Some of these buildings have a second level with windows. Sectoid snipers often fire from the cover of these windows, as shown in Figure 11-4.

From these windows, the Sectoids can fire at a significantly increased range. Because of the small size of the windows, it is difficult to kill these snipers short of blowing the top off the pyramid. The best advice when you encounter this situation is to do just that—rather than watch your soldiers drop one by one (see Figure 11-5).

Your Objective in the First Battle

You can do two things to successfully complete the outdoor segment of the Final Assault. The first is to treat it the same way as you treat every other ground assault mission in the game: Kill or incapacitate every alien.

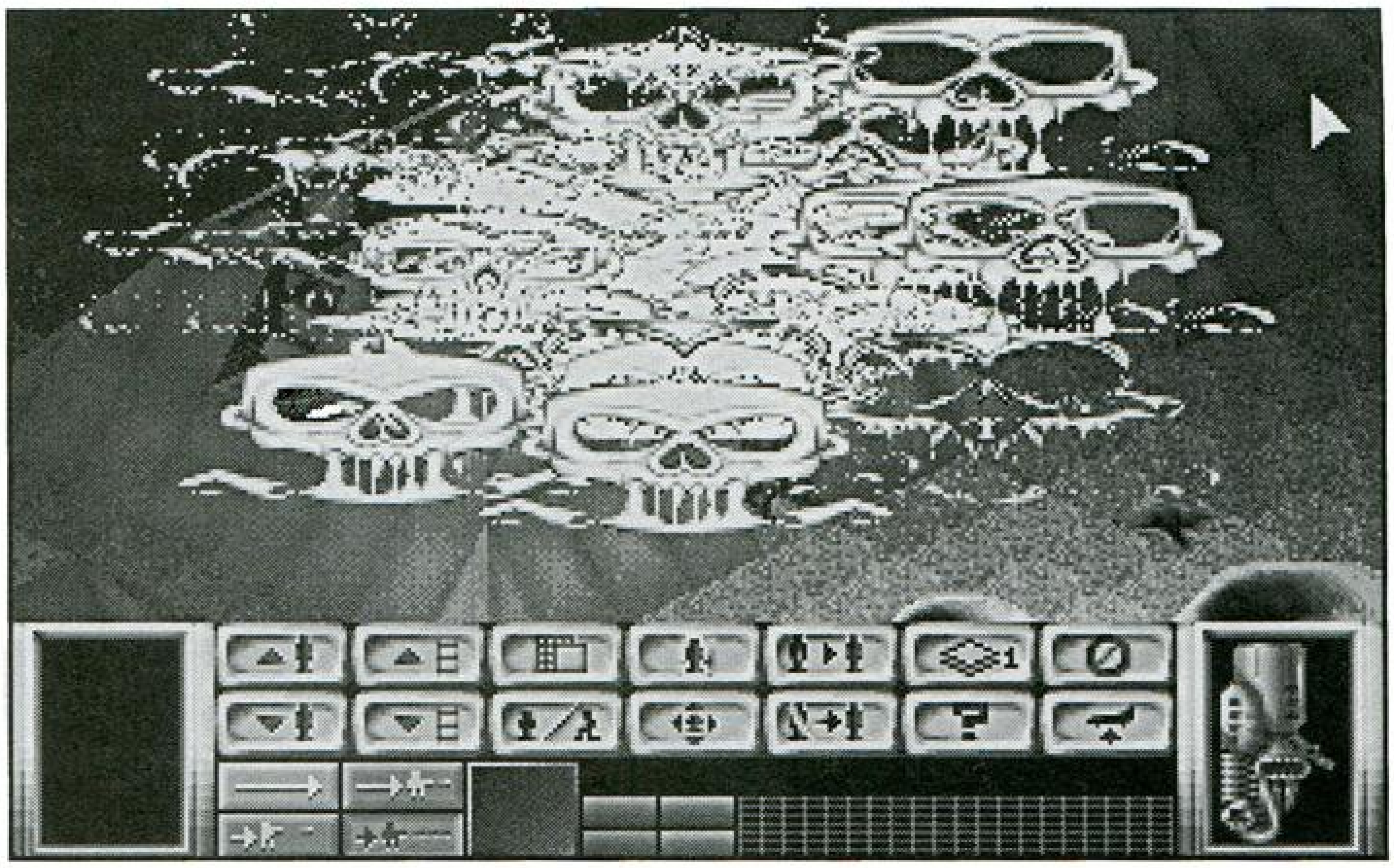


Figure 11-5 Another sniper problem solved.

This first choice is certainly a viable alternative. If you have a well-equipped squad of veteran soldiers, this strategy shouldn't be too difficult. If you have marginal or poor soldiers, however, you can run into a number of problems. The most common of these problems is panic and mind control. Psionically weak characters can be your worst nightmare when they kill half your squadron while berserk or under alien control.

It is also possible, especially on the more difficult levels of play, for your soldiers to be overwhelmed through sheer firepower. The longer the battle wears on, the more likely it is that one of these situations will occur.

If you choose this method of completing the first mission, therefore, use big weapons and destroy everything in sight. There is no reason to be cautious; as long as your own soldiers are out of range of the explosions, level the planet's surface as quickly as possible.

The second method of handling this battle can be potentially faster and somewhat less risky. One of the pyramids on the surface is different from the others: It contains an elevator that leads into the main base. This elevator isn't one of the usual, red elevators found in nearly every alien ship and base. Instead, it is an empty room with a green floor that is the same as the floor in the entry

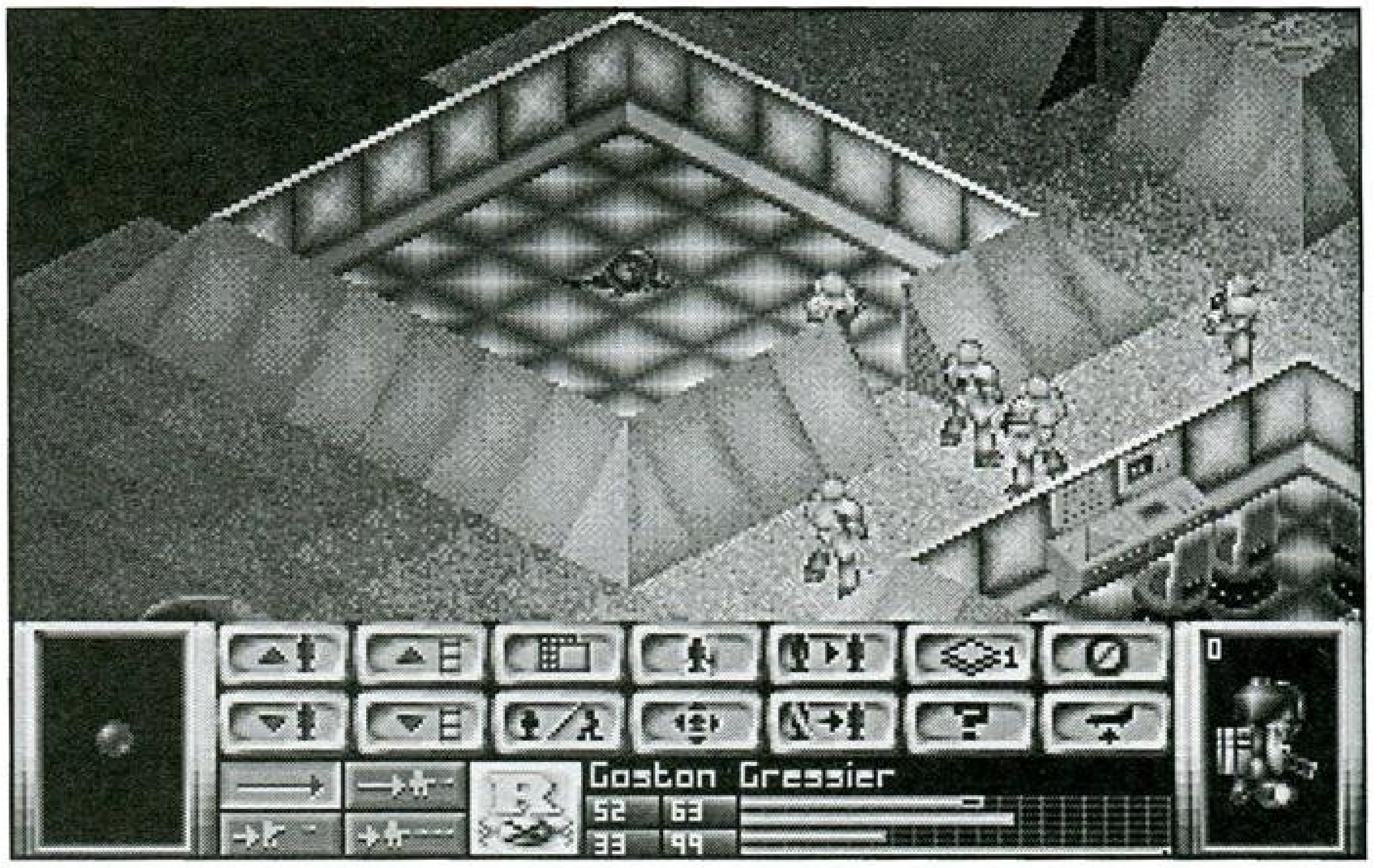


Figure 11-6
The entrance elevator to the Cydonia base.

chambers of an alien base on Earth. The pyramid containing the elevator is shown in Figure 11-6.

The placement of the alien buildings on the Martian Battlescape is random, so the building with the elevator to the base isn't always in the same position. If you are lucky enough to have landed close to the lift, the best way to end the battle quickly is to get all your units inside. After they're inside, you are instantly transported into the base.

This method of completing the surface battle has two possible flaws. First, if the elevator is too far from the Avenger, your soldiers are likely to get pinned down in cross fire. After this happens, losses can be heavy. When the situation turns to war, it is best to abandon your hopes of making it to the elevator until you can at least clear a safe path to the pyramid in some way.

The second problem is more a problem of logistics than of anything else. Because the pyramid containing the elevator has a door that is only one square wide, HWPs cannot fit into the building to use the elevator. The simple solution to this problem is to use a blaster launcher (or similar weapon) to blow a hole in the pyramid that is big enough, literally, to drive a tank through. When the dust clears, you can just casually drive your HWPs onto the elevator.

Either method can ultimately lead to success. A major difference between the Final Assault and other ground assaults is that, after fighting what can be a long and grueling battle on the surface, your soldiers are forced to instantly fight a second battle, with no time to recover from their wounds and fatigue. For this reason, it is a good idea to have medi-kits for everyone; that's the only way you can repair your soldiers' wounds and keep them in top fighting condition for the second half of the mission.

If you find that you're running low on ammunition or you feel that you might need an extra weapon, make sure that you pick up one of the aliens' weapons or get the weapon from the Avenger before you kill the last alien. After this battle is over, you immediately begin the next one. And unlike other ground assaults, the items lying around on the Battlescape are not automatically given to you at the end of the first battle.

When you have competed the first mission, it's time to go into the base and destroy the mastermind behind the entire alien plot.

BATTLE TWO: INSIDE THE BASE

When all aliens on the surface are either dead or unconscious or all X-COM units have entered the elevator to the base, the surface battle automatically ends and the remaining members of the assault team are transported into the alien base.

Again, this battle begins by giving you the opportunity to equip your characters and load your weapons. This time, however, no spare items are left on the ground at your feet—only the items carried by your soldiers at the time the first segment of the mission ends.

The second half of the Final Assault takes the form of an alien base attack, with a number of variations.

Alien Deployment

Again, the number and rank of aliens stationed at the base in this mission is determined by the level of game-play difficulty. Like the first half of the Final Assault, the number of each is a constant, as are the types of aliens that are present.

In this portion of the Final Assault, the alien populace consists of Ethereals, Chryssalids, Silacoids, Celatids, and Sectopods. The

Table 11-2 Alien Deployment for the Mars Battle

Alien	Difficulty Level		
	Beginner/ Experienced	Veteran/ Genius	Superhuman
Ethereal Soldiers	2	3	4
Ethereal Leaders	1	2	3
Ethereal Commanders	3	4	5
Chryssalids	3	4	5
Silacoids	3	4	5
Celatids	3	4	5
Sectopods	2	3	4

number and rank of the aliens stationed in the Cydonia base on each level of difficulty are shown in Table 11-2.

Base Layout and Tactics

The Cydonia base is laid out in a manner similar to other alien bases you encounter throughout the game. Like the other bases, the overall layout is randomly generated, but many of the sections that make up the base should be familiar to you by now.

As in earthbound alien base assaults, your team begins the mission with most of your units in one of two green rooms with an elevator leading down. Again, if you have a particularly large squad, some of your units may start in the chambers beneath the green rooms.

This is the perfect opportunity to save the game. This advice may be obvious, but it bears mentioning again. A saved game at this position gives you a chance to try this part of the mission again if something goes wrong. Remember: You cannot send a second mission to Cydonia if you abandon the mission or lose.

Begin by bringing down enough units from the green rooms to cover all the entrances and exits in the room below. Start with the HWPs: Bring them to the lower level and move them as far as possible into the exit corridors. Any exits you cannot cover with the

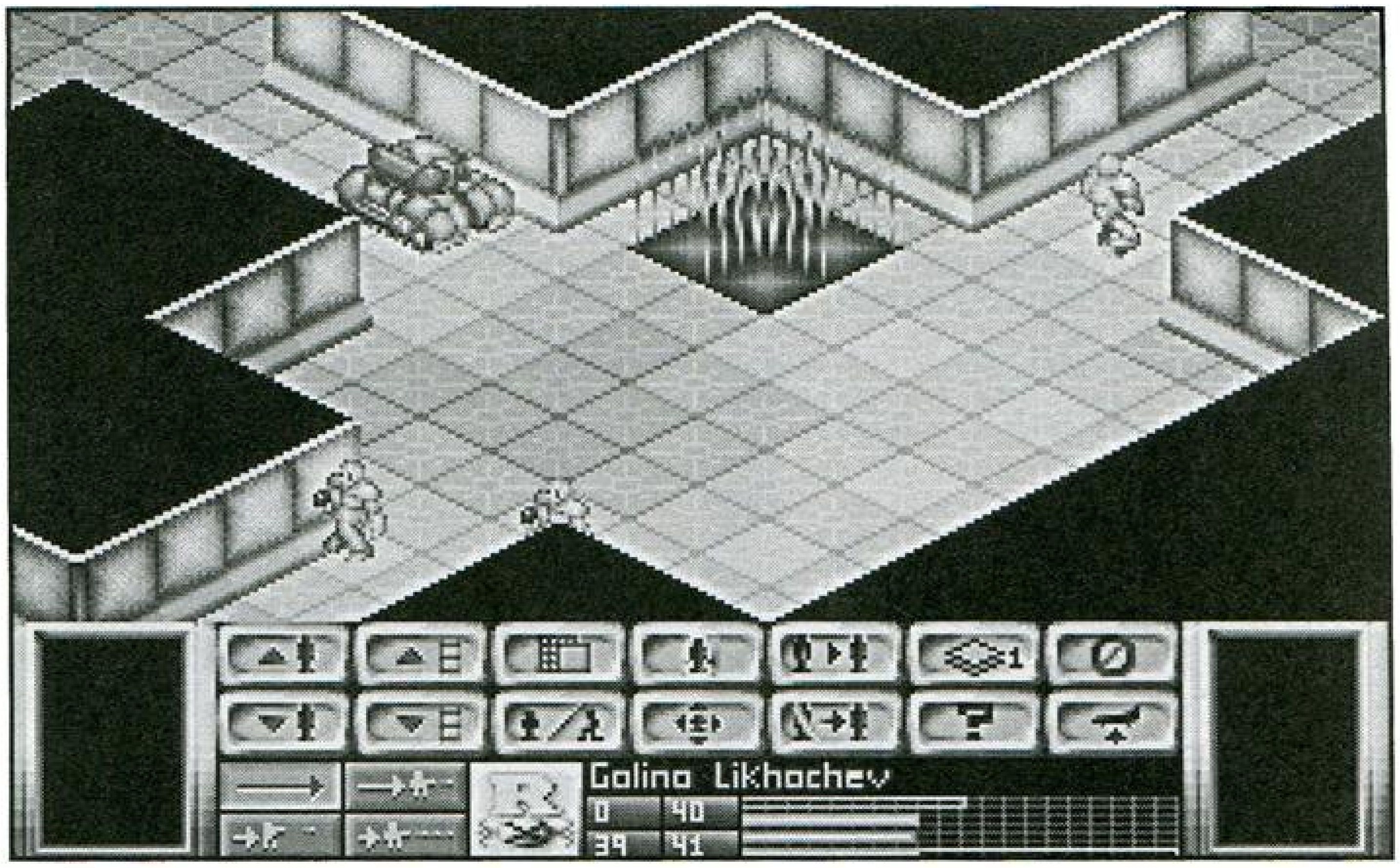


Figure 11-7
Initial squad deployment in the Cydonia base.

HWPs, you should cover with one or two soldiers, as shown in Figure 11-7.

Choose your best soldiers as the first ones down the elevators. These first soldiers act as your front-line troops, leading the advance into the base.

After the entrances and exits are covered, you should leave the rest of the units in the green rooms if you have a large squad. Keep in mind that crowding soldiers together increases the chance of the aliens using grenades and other area-effect weapons.

Before ending your first movement phase, click the Map Screen button on the Battlescape control bar. The overhead view of the base map shows the position of the two halves of your squad. Although the two green rooms may be close together, they are often halfway across the base from one another. This view gives you a rough idea of which section of the base each party is in, as shown in Figure 11-8.

On the second turn, move your units that are covering the exits outward along their respective corridors and rooms in groups of one or two. When they reach a room or any other open space along the way, have one of the units turn 180 degrees as soon as the unit enters the area. Barring any obstructions, this strategy should give you a good idea of what the area looks like and show any aliens that might be hiding in the corners.

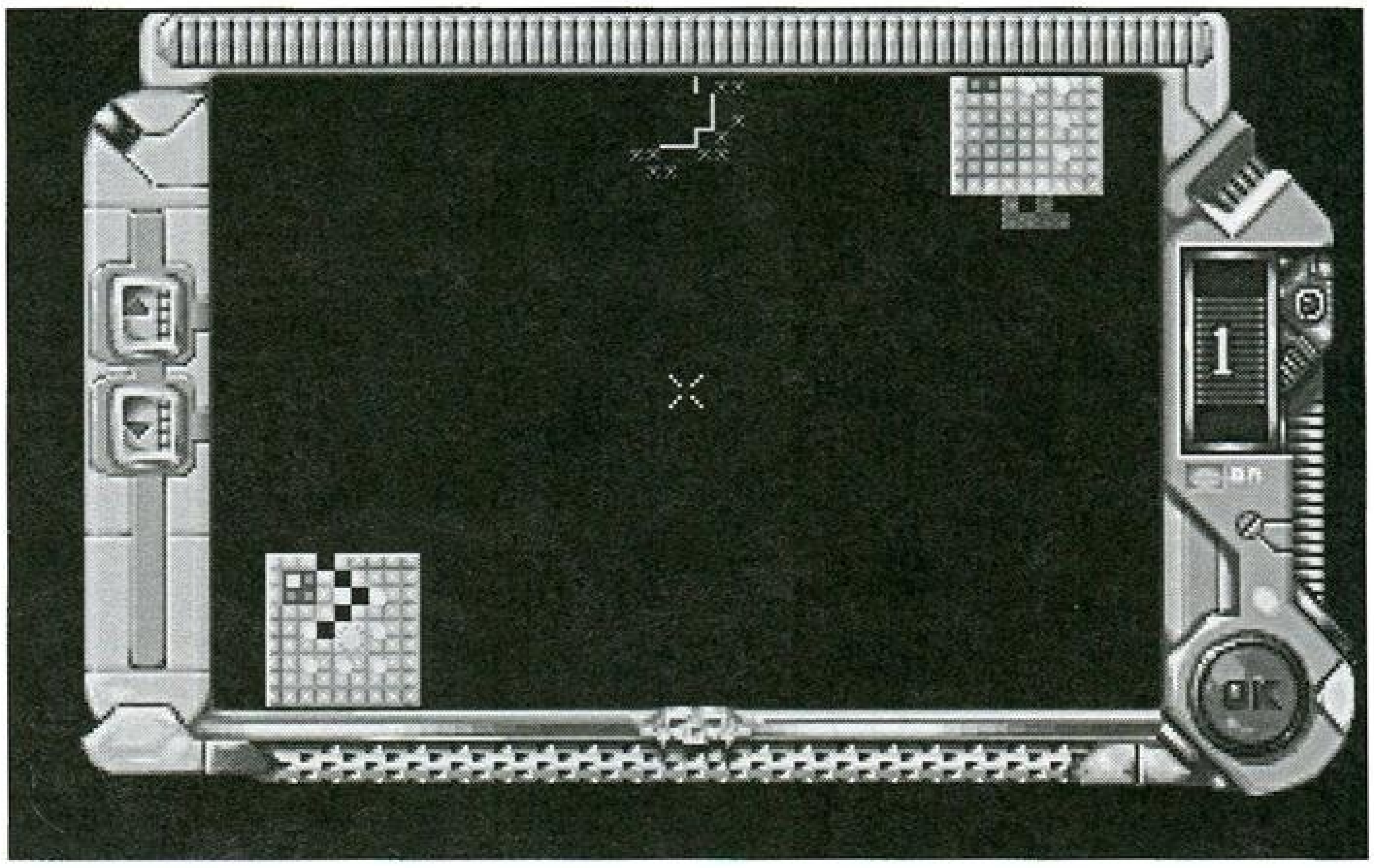


Figure 11-8
Overhead view of the first turn in the Cydonia base.

After the first group has moved out, send the rest of the soldiers you left in the green rooms down the elevators, and have them take up positions in the exits in the same manner as the first group did. This technique gives you two waves of units: one acting as scouts and the other as backup units. Continue in this manner as you explore the base.

Gardens

A prevalent feature in alien bases of any sort, and especially in the final base, is the garden (see Figure 11-9). This dark area contains many varieties of alien plant life. The plants themselves are harmless, but the gardens present several problems.

First, they are very dark, and the plants have a dark purple hue. This coloring makes these areas popular as camouflage for aliens. The Chryssalids are particularly difficult to see while they're hiding among the plants, because of their dark gray color.

The second problem is that the plants provide not only camouflage but also cover from weapons fire. An alien on the far side of a garden may be visible, but it is virtually impossible to get a line of fire to shoot the alien. The alien cannot fire either, but because most of the aliens at the Cydonia base attack either through psionics or close combat, this is of little comfort.

Finally, the plants are sometimes so thick that units cannot be moved through the garden. Often, because you then have to send your units around the garden somehow, you waste valuable time and energy.

Fortunately, there are solutions to all these problems. The darkness can be eliminated by throwing an electro-flare into the garden. Unless the garden is particularly huge, a single flare lights up the entire room.

The solutions to the second two problems are the same: high-explosives. Often, these items take care of many problems at a time. When a garden blocks the way or you suspect that something may be hiding inside or just on the other side, move all your units away from the room. Then have one of your soldiers fire a blaster bomb into the garden. The resulting explosion levels the entire garden, making it simple to walk through, and kills most anything that might have been hiding inside. A more subtle method for smaller gardens is to throw a grenade into the center of the foliage. The resulting explosion may not destroy the entire room, but it leaves a path wide enough to walk through.

Upstairs

Just like alien bases you encounter on Earth, the Cydonia base has a number of rooms located on the upper level in addition to the green rooms you enter and the command center. These rooms contain food containers, power sources, and other alien equipment. Access to the upstairs rooms is through elevators scattered throughout the base.

Again, like alien bases on Earth, it is usually not necessary to enter these upper rooms. Most aliens in the base are on level 0 and in the command center. Besides, even if aliens are hiding in the upstairs areas, it is not necessary to kill all the aliens when you're fighting the Final Assault—just the alien Brain itself. It is a waste of time and effort, therefore, to send soldiers up to explore these rooms.

LOCATING THE COMMAND CENTER

Because the Cydonia base is heavily populated with aliens, it can lead to heavy losses of X-COM troops if you decide to locate and kill

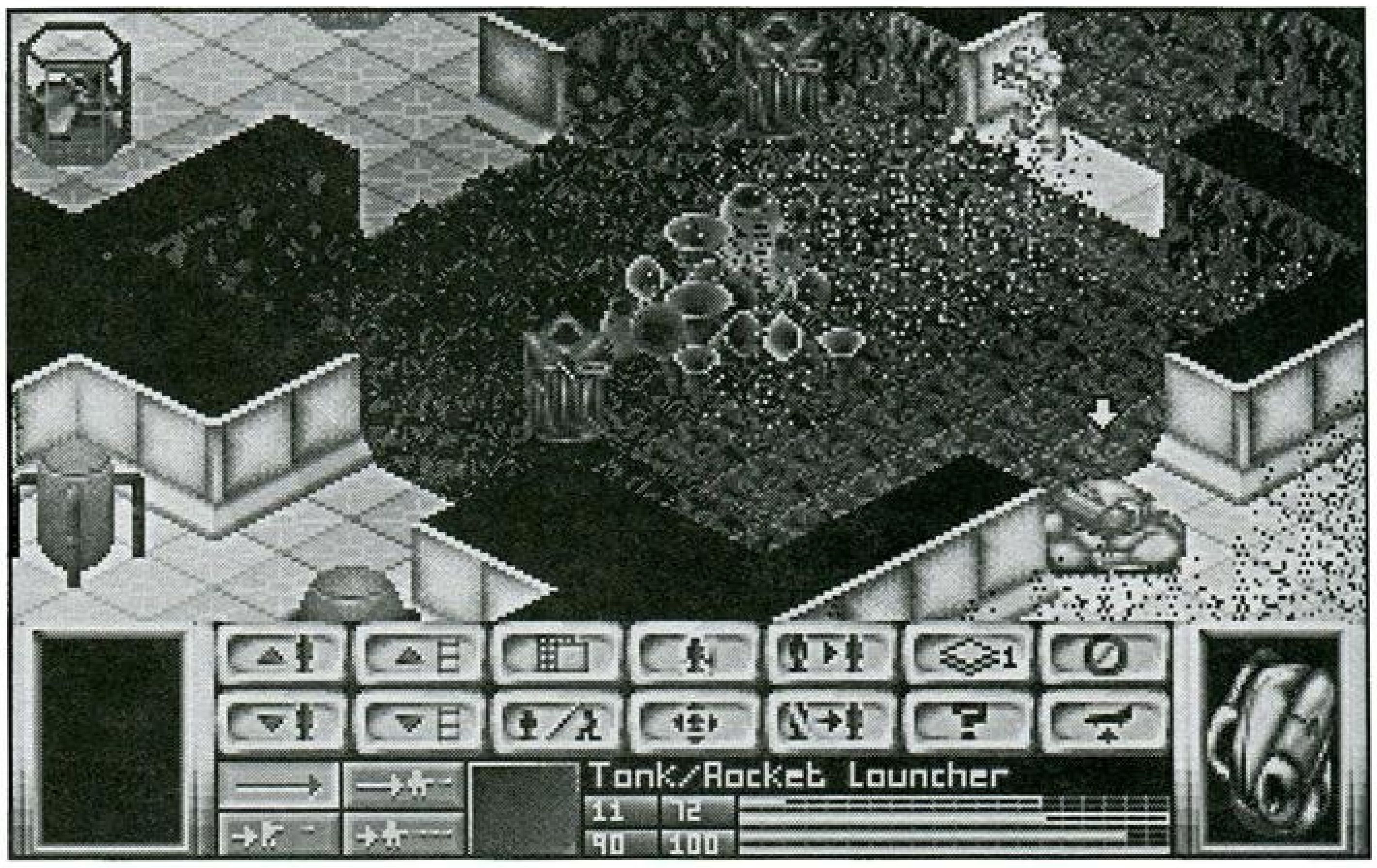


Figure 11-9
Aliens hiding in one of the many gardens in the Cydonia base.

all of them. It is advisable, therefore, to send your squad out immediately in search of your objective: the alien Brain. The Brain resides in the command center of the base. You should begin searching for the command center entrance as quickly as possible.

The command center entrance in the Cydonia base is distinctive and always looks the same no matter how the base is laid out. It is laid out differently, however, from the entrance to the command center of alien bases on Earth. Its obvious features give away its location rather easily; you should recognize it immediately when you see it.

The entrance is a set of double doors apparently set into the walls of a large, square room. The doors open into the end of a T-shaped corridor that leads to two elevators. The elevators lead to the command center. The layout of the command center entrance from the map view is illustrated in Figure 11-10. The entrance as it appears on the Battlescape is shown in Figure 11-11.

Attacking the Command Center

Before you can attack and destroy the Brain, you must first eliminate the aliens who are guarding it. Depending on what equipment you have, this process can be relatively easy or extremely difficult.

The Brain guards are the most elite troops available: Ethereal commanders. The guards, who are generally armed with heavy

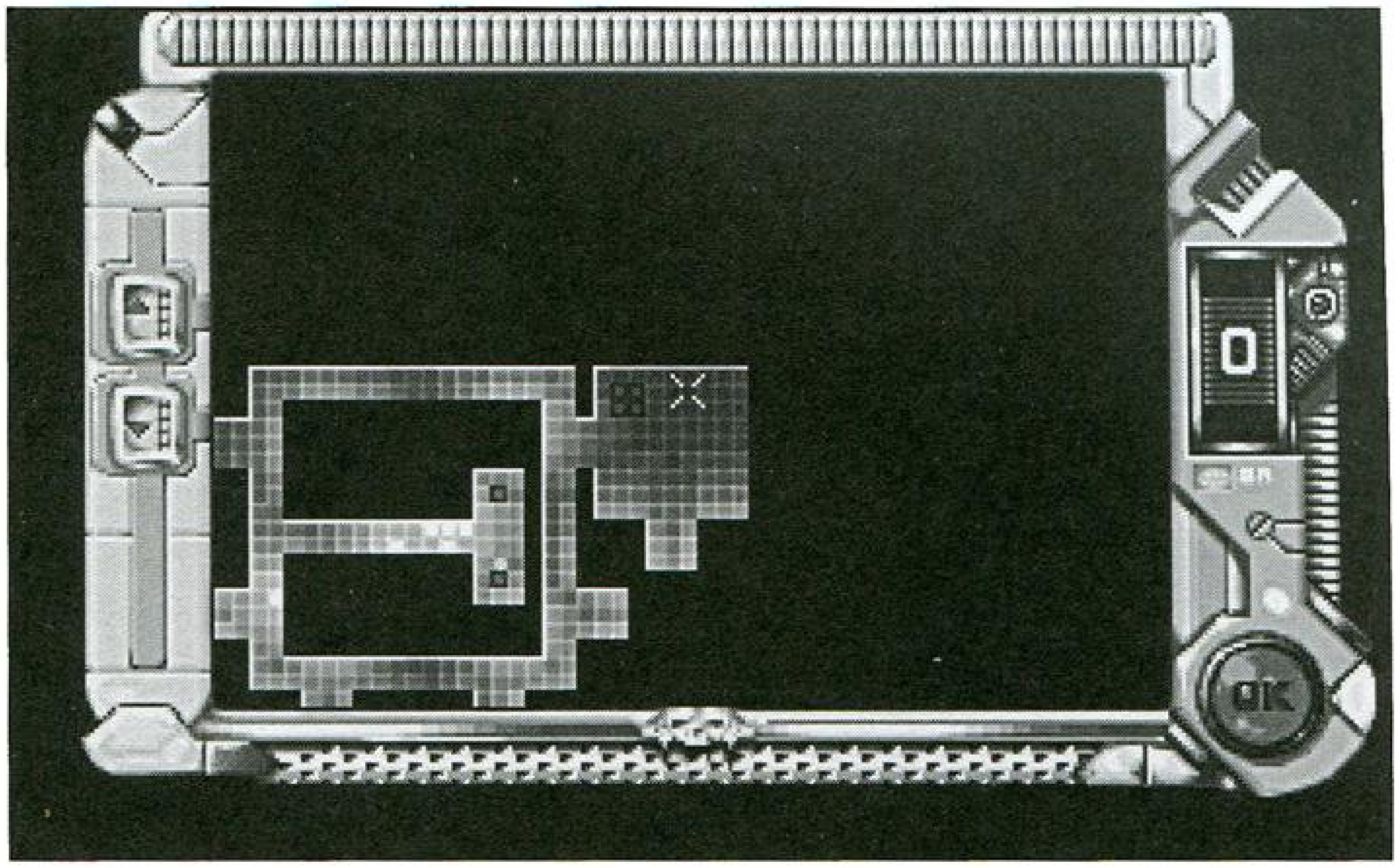


Figure 11-10 The entrance to the Cydonia command center, as seen from the map view.

plasma guns, usually remain in the command center to guard their master, launching psionic attacks from a distance. They come out only when most of the other aliens in the base have been killed or when X-COM units are near the command center entrance for an extended period.

You can use several strategies to storm the command center. One is to simply have your soldiers wait in the command center's

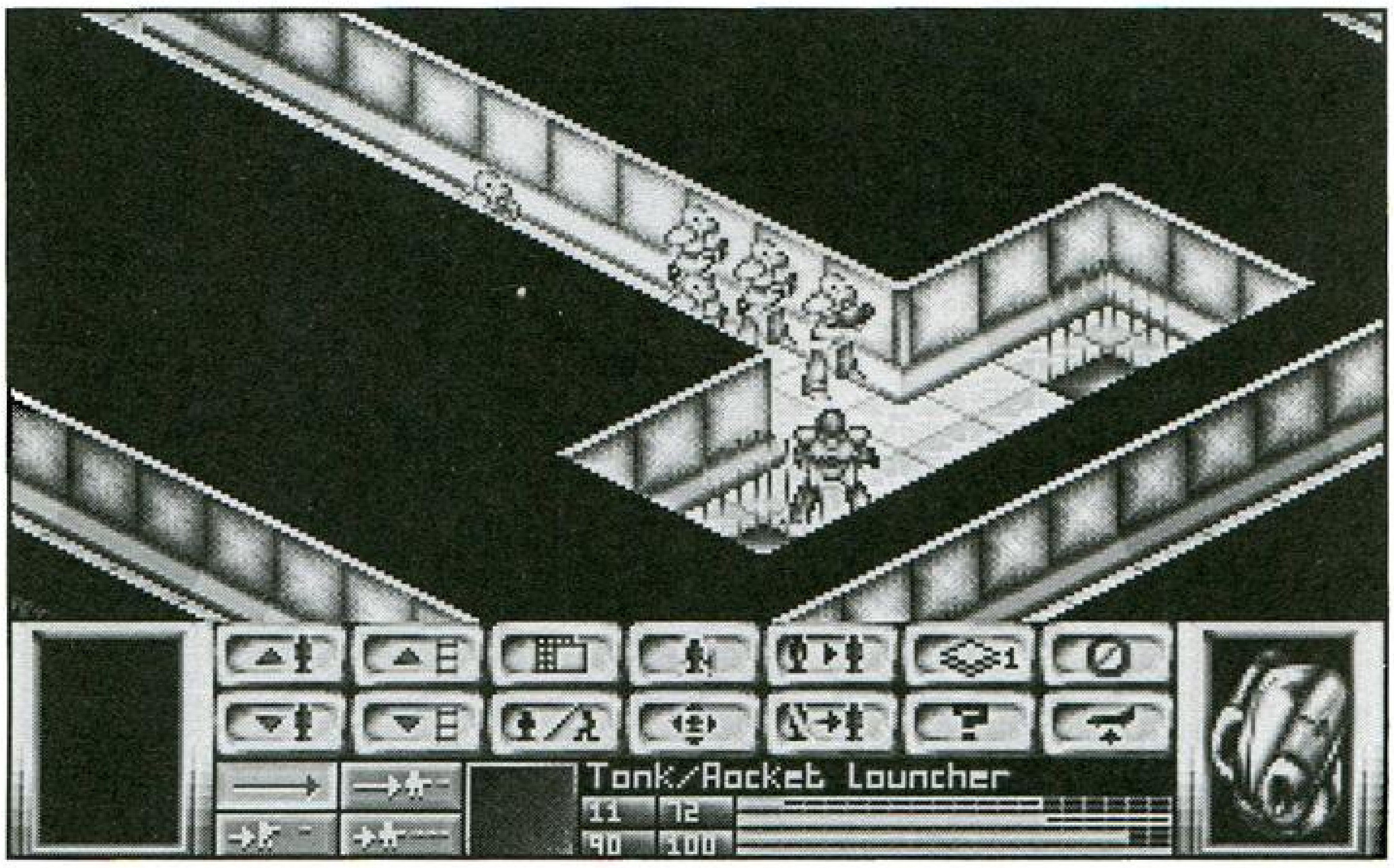


Figure 11-11 The entrance to the Cydonia command center, as seen on the Battlescape.

access corridor until the guards eventually come out and then kill them one by one. The number of guards is the number of Ethereal commanders listed on the deployment chart.

This venture can be a risky one if you haven't killed all the aliens wandering the base; you can quickly find yourself pinned between the guards and the other minions of the base. Another danger in this strategy is that the Ethereal guards are also launching psionic attacks. The longer you wait around, the more likely that someone in the squad may go berserk or fall under alien control. Also, your soldier's morale drops steadily unless you are killing some aliens at fairly regular intervals. Unless your soldiers are particularly powerful, a more direct approach may be a little less risky.

Access to the command center is through two elevators leading up from the end of the T-corridor. If the guards are still in the command center, they are usually deployed near the top of the elevators, between the elevators and the Brain, as shown in Figure 11-12.

If you have no heavy weapons, such as the blaster launcher, you must take a direct approach to the attack. Take your four best soldiers and move them down the corridor. On the turn before you intend to attack, place one soldier within one step of each of the elevators, and leave the other two crouched just around the corner. It is better to place the soldiers on the corridor side of the eleva-

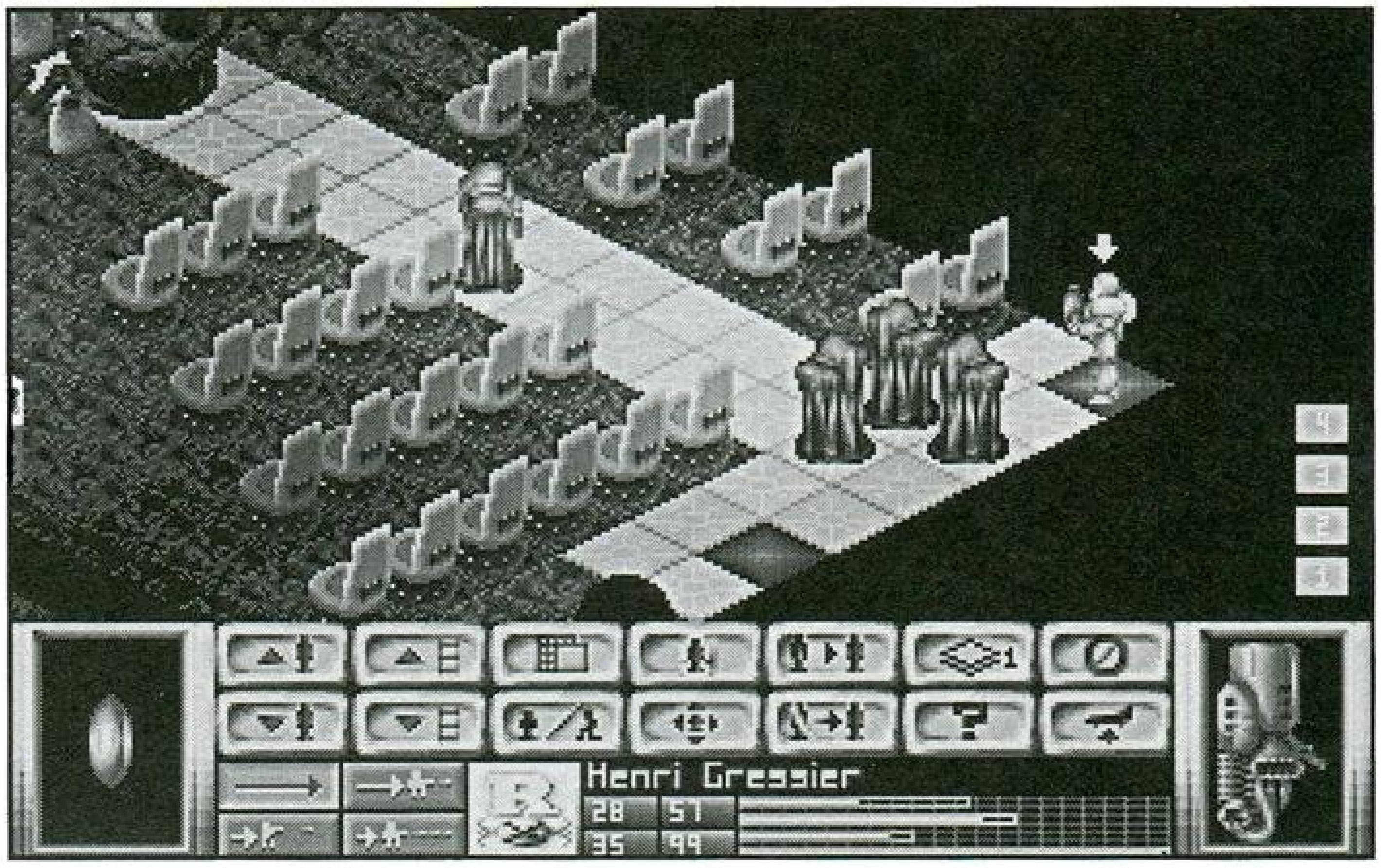


Figure 11-12
Typical guard deployment in the Cydonia command center (beginner level).

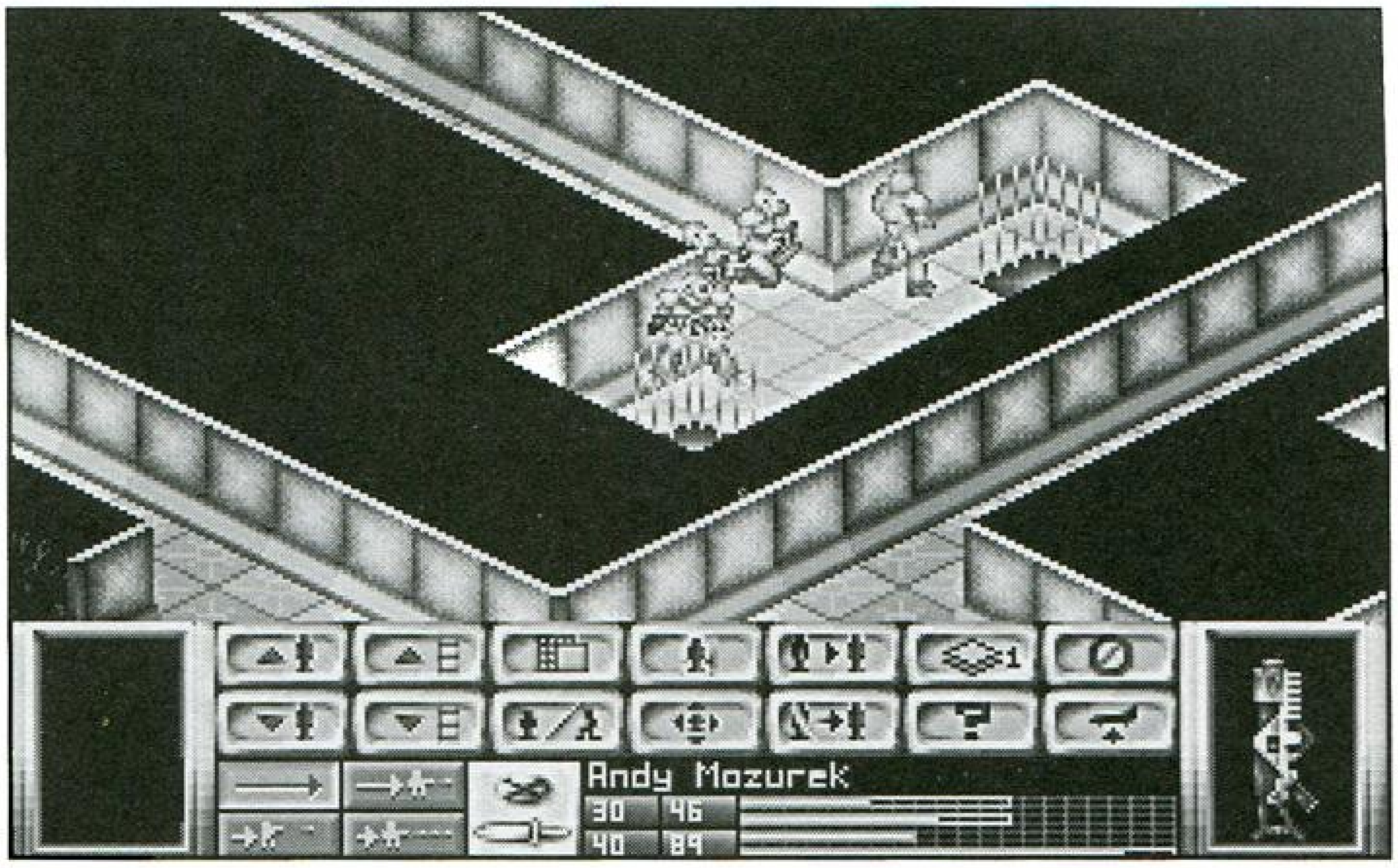


Figure 11-13
Preparing to assault the command center.

tors, as shown in Figure 11-13, because the guards above can fire their weapons down the elevator shaft.

If your soldiers have grenades, prime them to explode in zero turns. Do this on the turn just before sending them up the elevator.

At the beginning of the next turn, move each of the soldiers onto the elevators, and turn them to face in the direction of the two soldiers crouched in the corridor. This way, the guards in the command center should be visible when the soldiers reach the second level. Send the first soldier up, throw the grenade, and send the soldier back down. Do the same with the second soldier. The grenades may do the trick, killing or at least stunning the guards. Grenades are a good choice in this situation because, even if the elevator soldiers are killed, they drop the primed grenades that still do their job. The more grenades, the better: If each soldier has two, throw two grenades each!

On the following turn, send the soldiers back up and have them finish off the guards with their guns, as shown in Figure 11-14. If necessary, send the two guards in the corridor up also.

This method has nearly as much risk as waiting in the corridor for the guards to come out, but it is much quicker.

The best way to deal with the command center guards is to use heavy weapons. The absolute best weapon for this task is the blaster launcher. Have one soldier advance down the entrance corridor

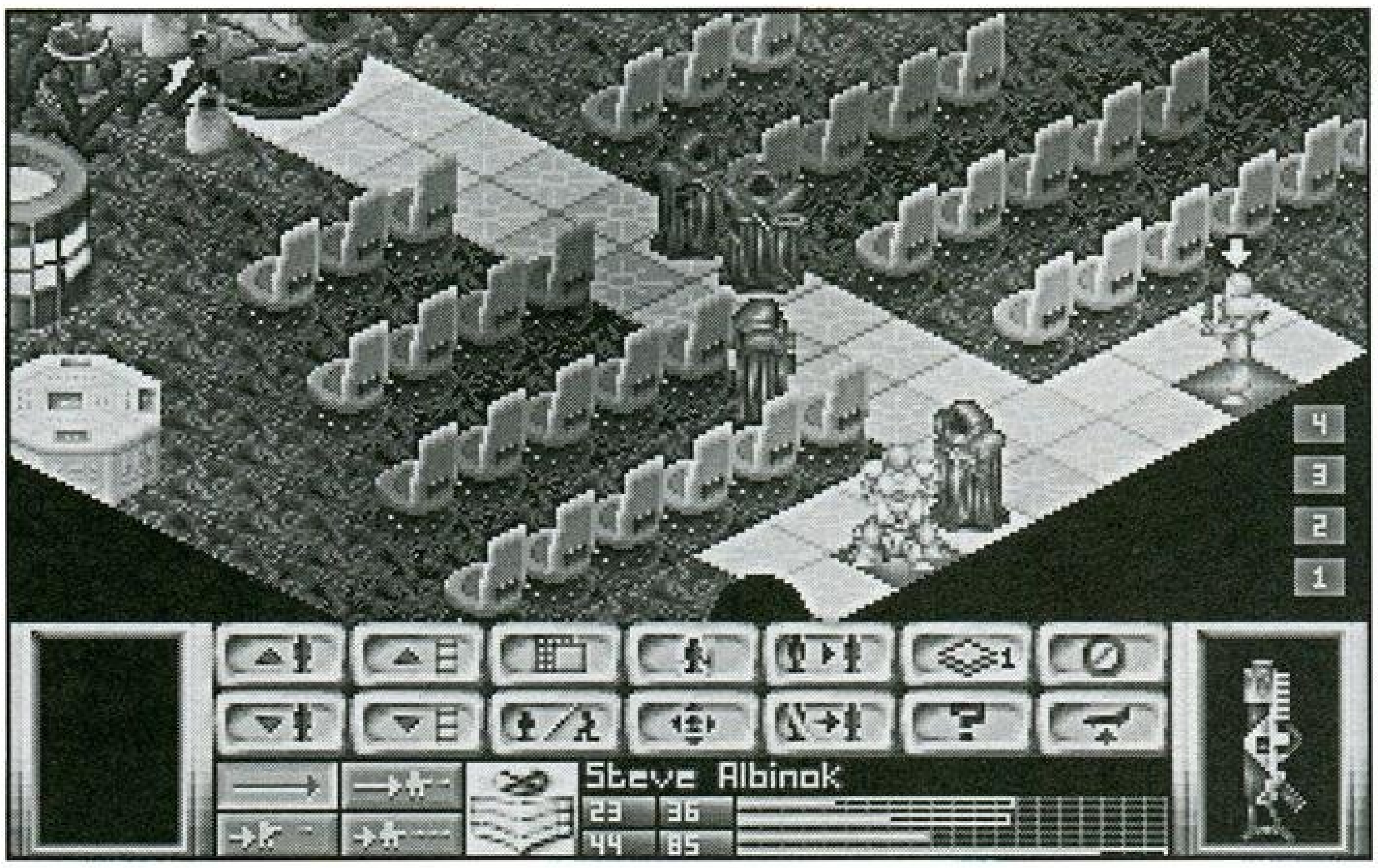


Figure 11-14
Finishing off the command center guards (the conventional way).

with a blaster launcher to the T-junction, leaving at least two other soldiers to guard the corridor entrance. When the soldier reaches the junction, have him turn either left or right to identify the location of an elevator, as shown in Figure 11-15.

On the next turn, fire a blaster bomb up the elevator shaft. Set the first waypoint at the base of the shaft, the second on the second level, directly above the shaft, and the third to a position between the two elevators on the second level. When the blaster bomb goes off, it should take out all the guards (and most of the room). The results of this strategy—the fastest, easiest, and safest strategy to use against the guards—are shown in Figure 11-16.

Whichever method of eliminating the guards you choose, after the guards are eliminated it is time to go after your main objective: the Brain.

Destroying the Brain

Finally, you have reached your objective. You are ready to end the alien problem once and for all by destroying the controlling entity behind the entire operation: the alien Brain.

With the guards out of the way, destroying the Brain is a simple matter. The Brain is always located in the same place: at the end of the command center opposite the elevators. The "Brain" is actually a biomechanical computer, linked to a complex network of

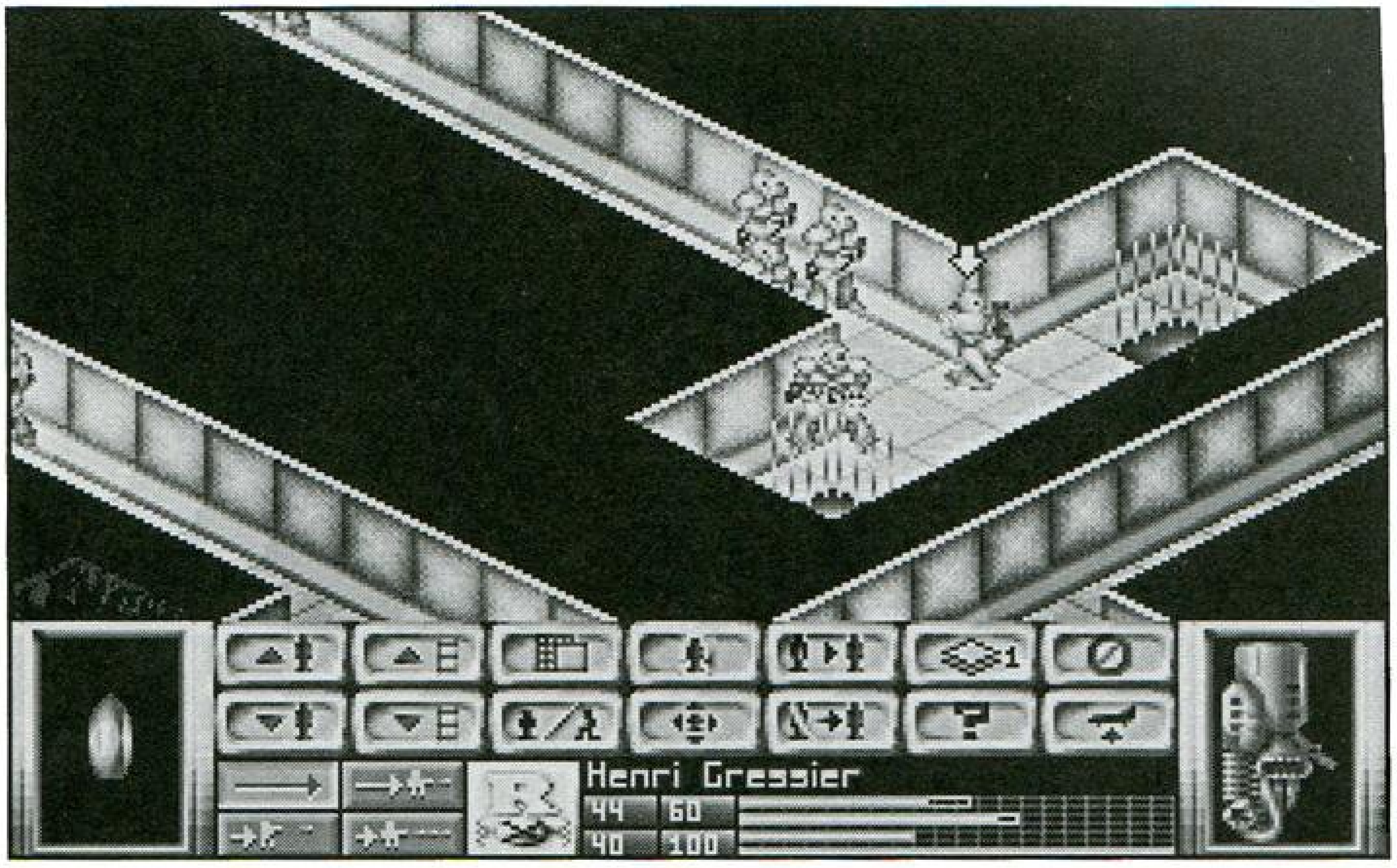


Figure 11-15
A heavy-weapons expert takes up a firing position.

subprocessors and communications equipment. It sits pulsating and silently controlling its minions from afar, with no means of self-defense. It is incapable of launching any sort of attack against you.

The Brain is not very strong, and all weapons affect it equally. To destroy it, and thus win the game, simply bring up as many soldiers as you want and begin firing at it. It is composed of four separate sections, and each section must be destroyed in order to kill it (see

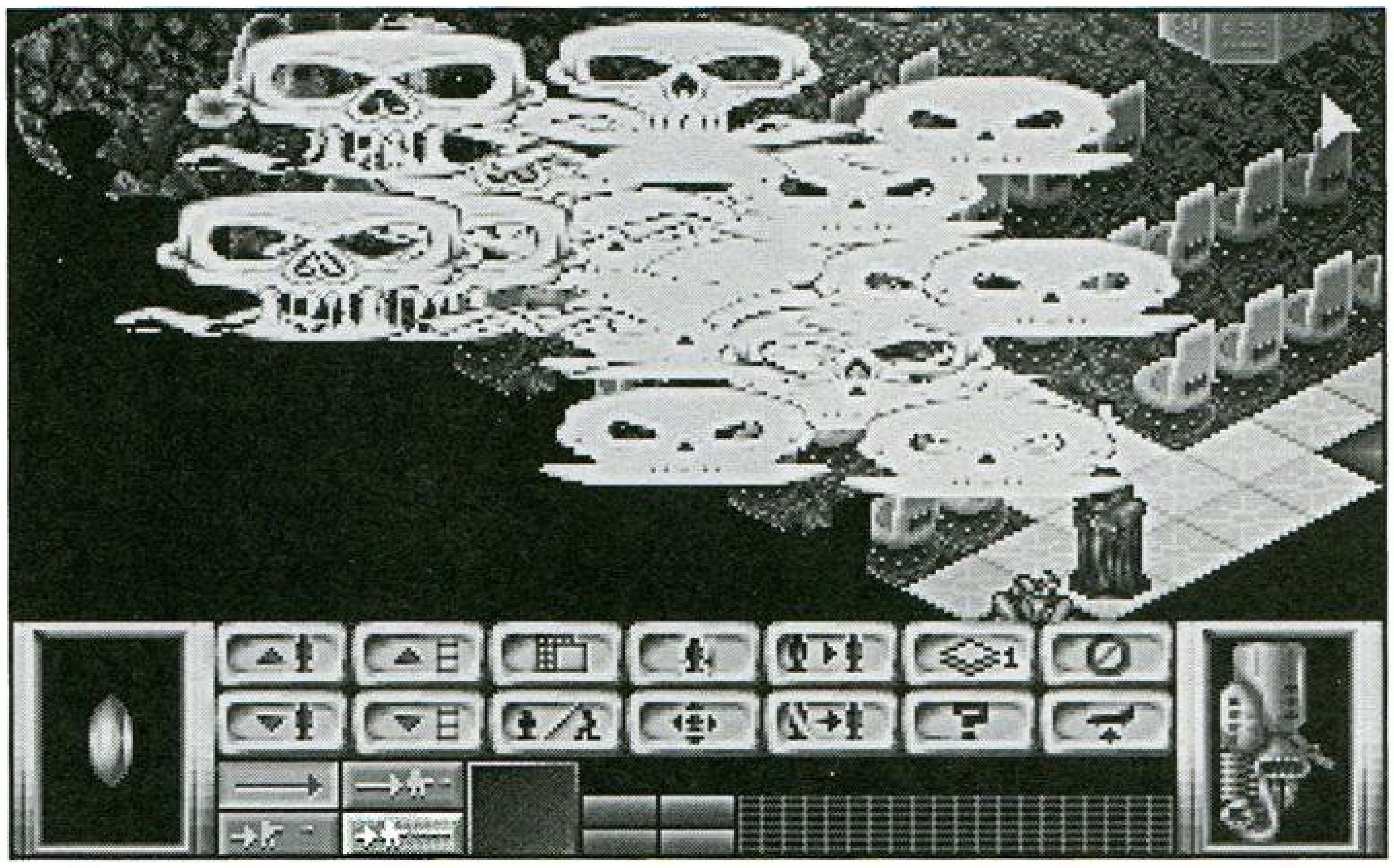


Figure 11-16
Finishing off the command center guards (the easy way).

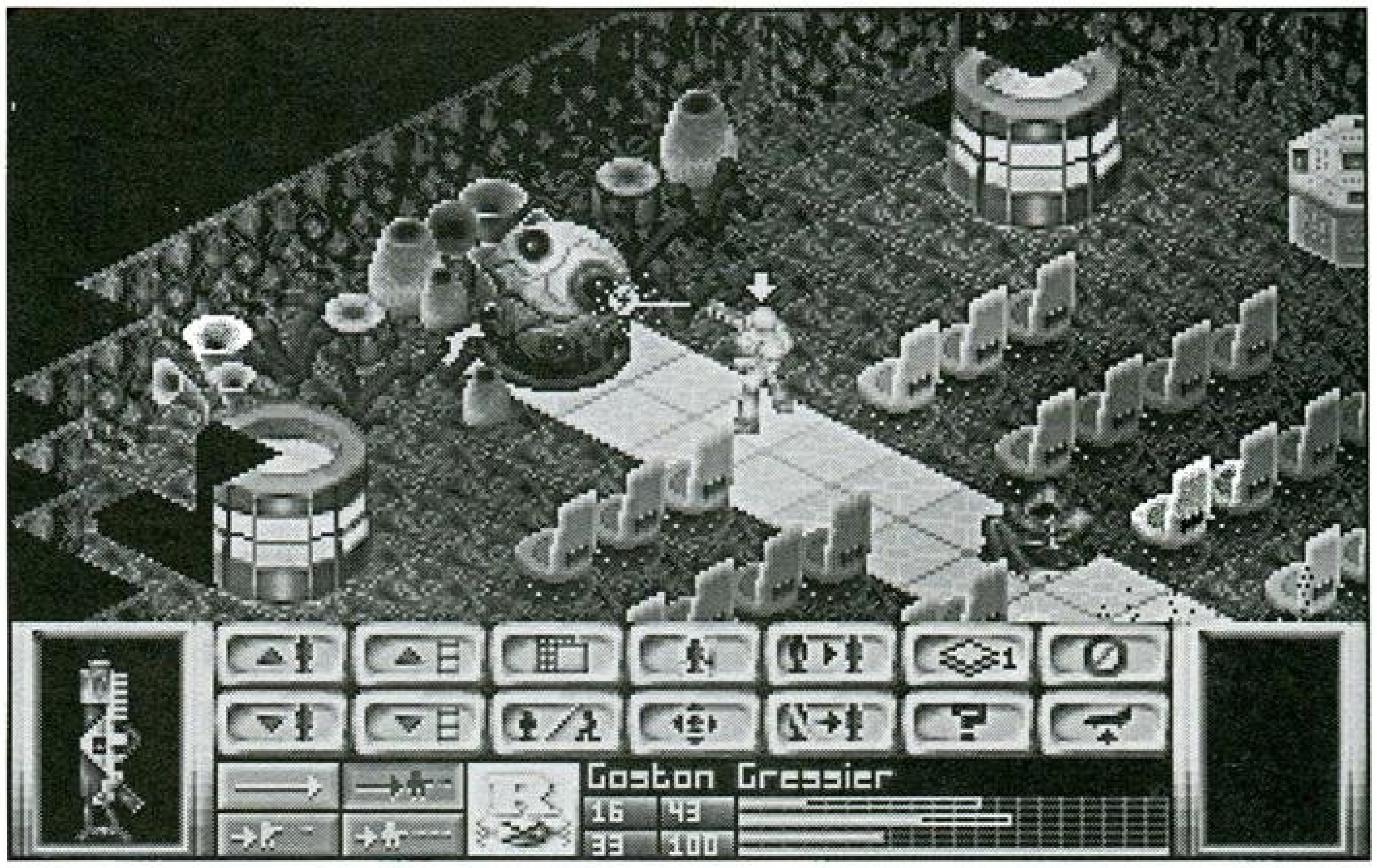


Figure 11-17
Destroying the Brain (the slow way).

Figure 11-17). A well-placed alien grenade thrown directly at the base of the Brain does the trick nicely.

There is also a faster way to win. Refer to the blaster launcher strategy of eliminating the Brain guards in the preceding section. Rather than set your third waypoint between the elevators, set it on the opposite end of the room, where the Brain sits. In a single blast, you can win the game without ever entering the Cydonia command center (see Figure 11-18).

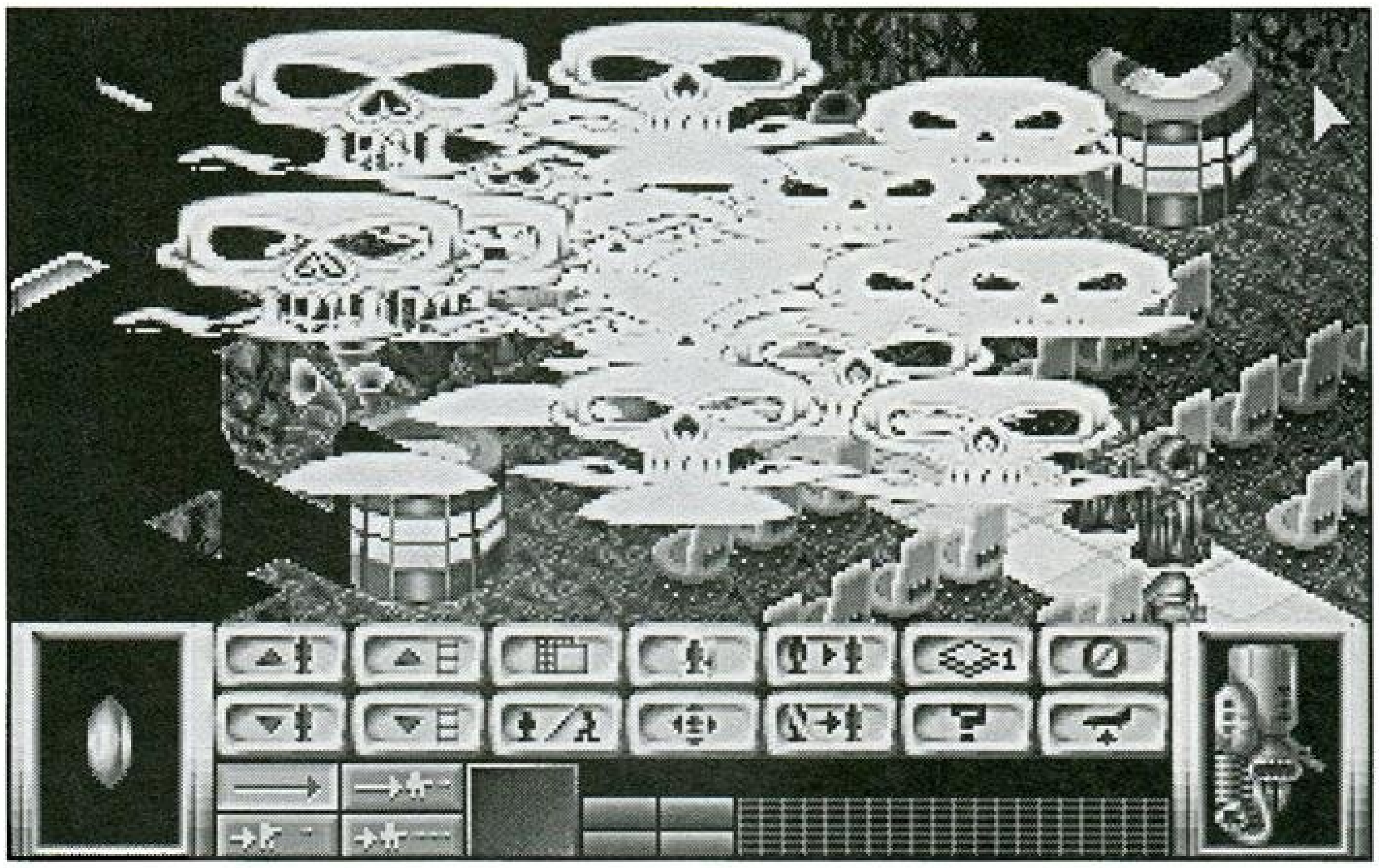


Figure 11-18
Destroying the Brain (the quick way).

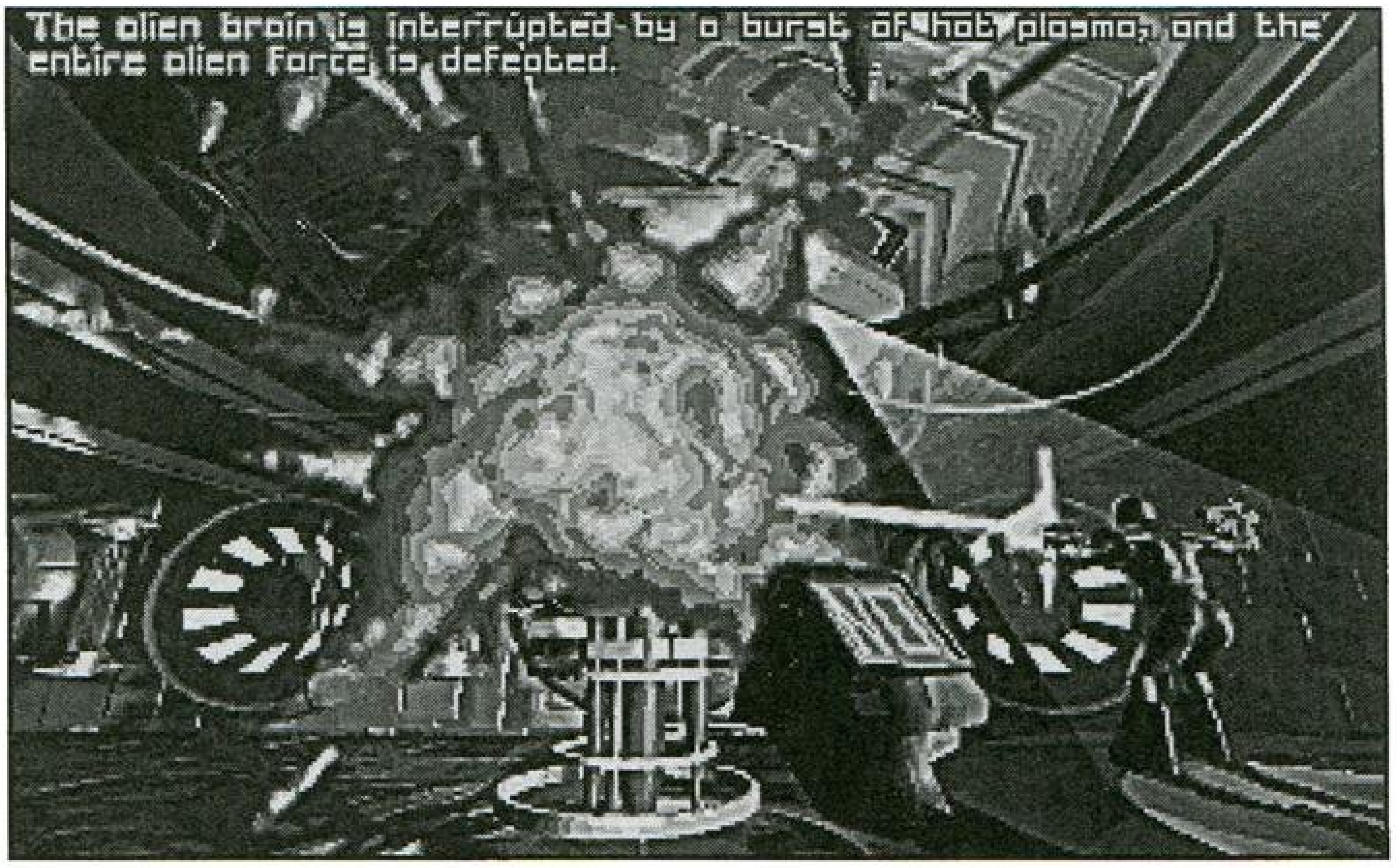

The alien brain is interrupted by a burst of hot plasma, and the entire alien force is defeated.

Figure 11-19
Victory!

Either method works equally well. After the brain is killed, you win the game (see Figure 11-19).

A FINAL NOTE

An important thing to remember when you're attacking the final base is that the game ends immediately after you destroy the Brain. The significance of this statement is that you do not have to be careful about destroying normally valuable items, such as UFO power sources and UFO navigation. Whatever you may find here, you can't take it with you. You can tailor your attack strategy accordingly, therefore, and allow your soldiers to engage in a raid that is much more violent than usual. Because of the large numbers of dangerous aliens wandering the corridors of the Cydonia base, an "explosive" strategy is your best bet for victory.

Chapter Twelve

EXPERT ADVICE

All the advice given so far in this strategy guide has been based on the facts and figures built into X-COM: UFO Defense by its designers. It was compiled through many hours of research and many phone calls and other communications between the author and the design team.

But some of the best game secrets transcend mere facts and figures. Some things just have to be learned through hours of trial and error. Nothing can surpass the experience of having led literally hundreds of X-COM missions. Certainly, you might eventually learn about many of these hints and strategies through your own experience, but I have included this chapter in the book so that you can learn from the experience of others and keep from making frustrating (and often fatal) mistakes.

The advice given here is divided into sections that correspond with different aspects of the game. The people quoted here are among the finest leaders X-COM has ever known. These valiant soldiers are now retired and have engaged in civilian jobs in the computer software industry. Take their advice to heart: They learned through many hours of long, hard-fought battle experience; it may just increase your effectiveness and your enjoyment of the game.

Thanks to the following people who were extremely helpful in providing the advice in this chapter:

Chris Bowling (MicroProse Customer Service)
Andy Mazurek (MicroProse Quality Assurance)
Jim Hendry (MicroProse Quality Assurance)
Julian Gollop (Mythos Games)

BUILDING BASES

"Always look to the future when building bases. You have to remember that it takes some time to get base facilities built and functional: You can't just call your friendly neighborhood real estate agent and have him find you a nice, little bungalow with adjoining laboratory, manufacturing, and spaceship hangar facilities. When you decide to build a new base, make sure that you have enough money to start constructing all of the base structures right away. This makes the new base fully operational much more quickly than building structures one at a time.

"Conversely, make sure that you don't overbuild at first. Build only what you can afford to maintain. When you think you have enough money to build a sizable new base, always remember that every facility you add to the base has a monthly maintenance cost. Do a little math, and check your finance graphs to make sure that you aren't building a base that is so expensive to maintain that it will leave you with little or no money after all the bills are paid."

—Chris Bowling

"When deciding what base facilities to build, prioritize your needs. Your first priority should be storage space. If you are successful in your ground assaults, you will quickly find that your general-stores facilities are overflowing with alien equipment, artifacts, and corpses. Although, if you are a good housekeeper, you should avoid letting useless items pile up; sometimes you just don't have the time to check the warehouse after every mission. If you don't have ample storage space, you just might end a successful ground assault with that alien

or artifact you so desperately need, only to have it left behind because there is nowhere to store it when you get home.

"After storage, your order of priorities should be detection systems, laboratories, work shops, and living quarters. Detection is important in any base. Even if you intend to use a base strictly for research and manufacturing purposes, build a small radar system there. This increases the area over which you can detect UFOs. You can then launch interceptor craft from other bases as needed.

"The last thing you need to build is base defenses. Early in the game, your bases will be pretty much left alone by the aliens. This gives you some time to do some research and come up with some really effective defenses. By the time you actually need to install defensive systems, you should have top-of-the-line equipment available."

—Jim Hendry

"Keep a close eye on your technology, and make sure that you have the resources to take advantage of the advancement as soon as possible. That means, if a new plane will become available soon, make sure you start building a new hangar for it—even while the research is in progress. That way, you'll be able to build the new ship as quickly as possible.

"Also, as you are able to build new and better weapons, make sure that you have enough storage space to put them in when you want them."

—Chris Bowling

"I use my first base as an assault base once I have Avenger craft. The assault base is my main base of operations. My landing craft are kept here."

—Andy Mazurek

"Although the number of detection devices at each base does nothing to increase the range of UFO detection, it does increase your chances of detecting UFOs within that range. Each radar system has a certain chance of detecting UFOs within its range every turn. Therefore, two radar systems at a single base double your chance of detecting UFOs.

"Of course, this isn't true when it comes to the hyper-wave decoder. Building more than one hyper-wave decoder per base is just a waste of money, since they automatically detect every UFO that flies into their detection radius."

—Chris Bowling

MANAGING AUXILIARY BASES

"When I build my second base, I build a hangar, general stores, large radar, and crew quarters. This will enable me to put one Interceptor and six soldiers in each base. I build all other bases on this same design premise.

"I will also expand some bases to serve a dual purpose. I will make one base my research base and install the appropriate laboratories and additional crew quarters. At this base, I will then stockpile scientists (125 to 150) to do my research.

"Similarly, I will make another base my manufacturing base. I stockpile engineers (150 to 175) at this base. Once you have this type of facility up and running, you can make weapons and sell them for profit. This will act as a subsidy to your operation.

"When soldiers at auxiliary bases get promoted, transfer them to your assault (main) base, and replace them with rookies. This keeps the assault base stocked with the highest-ranking, best soldiers."

—Andy Mazurek

BASE PLACEMENT

"When deciding where to build your bases, always keep in mind that your goal is to provide protection and cover for as much of the world as possible. Build your bases no closer to one another than the range of the longest-range detection device (no less than 2,400 miles apart).

"Think of your detection systems as a huge, invisible net that stretches across the sky. If you place your bases too close together, their detection nets overlap over large stretches of terrain, making detection in that area redundant. If the bases are too far apart, there are large stretches of terrain which aren't covered by any detection systems. The best arrangement is to have bases placed so that their detection nets just slightly overlap. This gives you the best chance of detecting the largest possible number of UFOs.

"Always keep funding in mind as well when you build your bases. You'll get more funding if your largest and most active bases are in the richest countries."

—Chris Bowling

"I always build a base in northeastern Australia. The aliens seem to have some sort of preference for this area. Additional bases are then placed at the North Pole, in South America, Africa, northern China, the Middle East, and at the South Pole. This should provide you with fairly good coverage of the world."

—Andy Mazurek

RECRUITING SCIENTISTS AND ENGINEERS

"You can never have enough scientists. Usually, 60 to 100 is a good range. Make use of all of your available laboratory space, and complete research projects as quickly as possible. Remember: The more scientists you have working on a project, the faster it is completed. Once you have researched everything and you find that you're in need of some money, sack all the scientists; they no longer serve a useful purpose.

"Engineers, on the other hand, are not nearly as important until you start building advanced spacecraft. Keep 15 to 30 on the job, and hire more when you want to construct better ships. Otherwise, you'll end up with a lot of expensive engineers sitting around collecting a salary every month for no reason."

—Jim Hendry

"Always research. Never have scientists idle. This also applies to engineers. Remember that you can make items and sell them for profit."

—Andy Mazurek

SOLDIERS

"Rank is based mostly on sheer numbers. The morale of your soldiers is raised if there is a high-ranking officer along with the team on a ground assault. If a high-ranking officer were always along, everyone would be much happier, right? Well, you can make everyone high-ranking, if you're willing to pay a little for it.

"Here's how: Build up a reasonably sized squadron of experienced soldiers. Then, at the beginning of the month, recruit lots of rookie soldiers and send them out on some battles to get them up to the rank of "squaddie." If you have recruited enough soldiers, your combat veterans will soar quickly to high ranks. When you have lots of high-ranking officers, sack the leftover rookies and squaddies so that you don't waste money paying them every month. What you have left is a full complement of high-ranking soldiers and no low-ranking ones."

—Chris Bowling

"When you recruit new troops, look through their stats. Getting rid of a soldier who has low stats early in the game can prevent serious heartaches later. Lower-stat characters are more susceptible to alien mind games. Nothing will upset you more than seeing a rookie going berserk or falling under alien control and killing one or two of your better guys.

"I remember one time when I had a guy who couldn't hit the water if he fell out of a boat. So, I gave him a rocket launcher with incendiary rockets: Even if he missed the target, some collateral damage could result. This worked fine for two or three missions. Then, during a terror site mission, he stepped off the ship and was attacked with mind control. He turned around and fired the rocket into the ship full of troops. Result: Eight dead, two stunned. The mission failed.

"This was also the time I learned the value of saved games."

—Andy Mazurek

"Rename the soldiers in your squads. At first I had a hard time remembering who was who when I had 15 soldiers out on a mission. I couldn't remember who had what weapon, who was the strongest, who had the most TUs, etc. Then I started giving my soldiers names of people that I knew. This made it much easier to keep track of who was who.

"This also has a subtle psychological effect on the way you play the game. When my soldiers had names which were randomly picked by the computer, there was no remorse in sending them to their demise. But when you name the soldiers after people you know, you tend to form a certain attachment to the little guys. You feel guilty about sending workmates into the middle of dangerous situations. You feel remorse when one of your best friends becomes Sectoid food.

"And, of course, you feel just a wee bit of evil glee when you send your boss into the battle first during every risky situation. (There is a certain satisfaction in seeing some people on the wrong end of a plasma rifle.)"

—Chris Bowling

"Know what is "average" when it comes to rookie soldier statistics. If you recruit new soldiers who are below average in more than one or two vital statistics, either sack them right away or use them as cannon fodder in dangerous situations."

—Julian Gollop

EQUIPMENT

"If you can't supply all of your bases with the latest technology, at least do your best to spread the wealth around. I try to keep my most important bases up-to-date, but I also try to make sure that my lesser bases are not completely outdated.

"For example, if I have three bases with 10 soldiers each and only 20 heavy plasma guns, I would divide them between the bases: eight, eight, and four. That way, I have two strong bases, but the less important base still has 4 soldiers who have the latest in weapons technology."

—Chris Bowling

WEAPONS

"Be sure to frequently check your base supply information; it's easy to forget that the status graphs are there when you get really involved in a hot game. It is vital to keep tabs on what equipment is available at each base and aboard all craft stationed at the base. The absolute worst time to find out that you have no ammunition for any of your weapons is when you land in the middle of a terror site. Check the supplies at least once a month to avoid being caught empty-handed."

—Chris Bowling

"Sell all your pistols right away. They are the least effective weapons in the game. Take the profits from the sale of the pistols and their ammunition, and buy proximity grenades and high-explosives. You can do a great deal more damage with a high-explosive charge than you can by popping away with an inaccurate little handgun."

—Jim Hendry

"In the wide world of weapons, there are many possible choices. However, the best weapon you can possibly take for general use is the heavy plasma. Yes, it requires that you do a little research first, but, boy, is it worth it! Not only are these heavy weapons accurate, deadly, and easy to carry—literally piles of them and their ammunition clips can be found at nearly every ground assault. That means you should never have to build heavy plasma guns or heavy plasma clips. Sure, the plasma pistol and plasma rifle have the same advantage, but when you're talking free weapons, why not go for the best?"

—Chris Bowling

"When damage of the surrounding area is no object, the best bet for the well-armed vet is the blaster launcher. Like all the other alien weapons available, blaster launchers and their ammunition can usually be picked up for free at any ground assault site. They are bulky to carry, so everyone shouldn't carry one. But if you have one or two guys sitting under cover and firing guided missiles that do 200 points of damage every turn, you can bet the aliens will be keeping their heads down!"

—Andy Mazurek

"Upgrade your weapons ASAP. Out-of-date weapons will cost you in the long run. They are less accurate, and they do less damage. In a heavy-duty battle, the last thing you want to do is to take a long time to kill every alien. Don't be a cheapskate when it comes to researching and building new weapons technology.

"And, when you do get around to updating old weapons technology, make sure you get rid of all your old, obsolete weapons. The last thing you need is to have a bunch of unused weaponry using up valuable general-stores space. Sell the old stuff and use the profits to buy something you need."

—Chris Bowling

"Be careful of heavy-weapons platforms that use a lot of Elerium. Hovertank/launchers are cool weapons that do a lot of damage, but at the end of the game, Elerium tends to run low."

—Chris Bowling

FINANCIAL ISSUES

"Always keep your maintenance costs in mind. Scientists, engineers, soldiers, Skyrangers, and Interceptors all have monthly costs. Get rid of all excess personnel, and get rid of old interceptors and transports as new craft become available."

—Julian Gollop

"If you are forced to make a choice between two or more ground assault sites, always send them to the richer or more populated areas. Defending the poorer, less populated areas of the world is far less profitable from a project-funding standpoint. So, if it's between a terror mission in New York City or a terror mission in El Siesta, Spain . . . well, farmer Juan is on his own."

—Chris Bowling

"If you play your cards right, you don't really have to worry about funding from other countries at all. Build a base dedicated specifically to manufacturing and storage. At this base, build the most advanced weaponry you can. I personally like the hovertank/launcher. Build these continuously, and just keep selling them. You'll make money faster than you can spend it, because you get significantly more money for selling these things than it costs to make them.

"Who's buying all these weapons? Who knows? But, like any good government official, you shouldn't care as long as you get to keep the money."

—Andy Mazurek

"Don't collect junk. A lot of what you pick up on ground assaults is stuff you already have, and it is useless to you sitting in your warehouses collecting dust. That's what the Smithsonian is for! Sell the stuff that you get from the aliens, even their plasma-riddled bodies. You would be surprised what a Sectoid corpse brings on the open mar-

ket. However, be sure to keep at least one of each item around until your scientists have a chance to research them."

—*Chris Bowling*

RESEARCH

"Research, research, research! Hire plenty of scientists to research all the cool stuff you take from the aliens. It's the key to winning the game fast!"

—*Chris Bowling*

"Research. This should be your number-one top priority. I buy as many scientists as I can and research laser weapons. Once I can build lasers, I research the medi-kit, and then, when it becomes available, I research armor."

—*Andy Mazurek*

"The best alien is not always a dead alien. Catching aliens alive will allow you to receive more information from them. In fact, you have to catch some live aliens if you want to finish the game. So bring them back alive, when possible, because we have ways of making them talk."

—*Chris Bowling*

SPACECRAFT

"Make sure that you have more than one landing craft. If you rely on one craft, you may not be able to cover a great enough area of the Earth. Also, if your one landing craft gets damaged, you are helpless to do anything to prevent the aliens from landing wherever they want until the craft is repaired. Take it from me: Once those little buggers find out that you can't come and get them, they'll be having the Sectoid family picnic on the front lawn of the White House!"

—*Chris Bowling*

"When the game starts, immediately replace the cannons on your Interceptors with Avalanches and Stingrays. The short range and low

damage potential of the cannon make it not only ineffective, but downright dangerous to use against anything larger than a Medium Scout."

—Jim Hendry

"When a country stops funding the X-COM project, send patrols over that country. You can usually find an alien base or two there."

—Andy Mazurek

INTERCEPTING UFOS

"In the beginning of the game, be careful of Battleships. In the air, they can destroy any of the early (X-COM) ships without trying. A single Interceptor against one of these things is like going after a pterodactyl with a fly swatter. The best move if you encounter a Battleship early in the game is to wait until it lands and then go after it. You'll find that it's much easier to defeat them on the ground than in the sky early on. Of course, it's not really all that easy either way, but you have to weigh the loss of a few men against the loss of an expensive ship.

"If you must go after a Battleship in the air, send at least two Interceptors after it. When both arrive at the target, attack with both ships."

—Chris Bowling

"It is best to let UFOs fly over a funding country and then shoot them down. This shows that X-COM is actively defending that country. (Of course, if you fail to shoot down the UFO or do badly in a crash recovery mission, the funding country will not be pleased!)

"If you have a hyper-wave decoder and can tell that the aliens are about to do an infiltration mission near a major funding country, try to shoot the UFO down immediately to stop the mission. Once the mission is finished (and the aliens have infiltrated the government), all funding is stopped and an alien base is built!"

—Julian Gollop

"If there has been a lot of alien activity in a certain area, send your interceptors to patrol that area. You just might get lucky and stumble onto where the buggers hide (an alien base, that is)."

—Chris Bowling

"Always keep one intercept craft relatively poorly armed to use against small UFOs. If you use more advanced, powerful weapons, the small UFOs will be destroyed in the air rather than crash landing. You do get points for killing the UFO, but if you need the equipment on the UFO and you end up vaporizing it in mid-air, you're out of luck."

—Jim Hendry

"Sometimes the UFO activity gets kind of heavy. Send your interceptors after as many of the UFOs as possible. However, you may have to pick and choose later in the game which crash sites to go to. If you have to choose, go to the crash sites near the rich and populated areas. Also, choose the crash sites of larger ships because they have the most equipment and artifacts."

—Chris Bowling

EQUIPPING YOUR SOLDIERS

"I personally like laser rifles. Laser weapons do not require ammo clips. This enables me to carry more things both on the character and on the ship.

"Once the technology enables me to use the heavy plasma gun, I will equip two characters with this weapon. This gives me some additional firepower if needed. As soon as you can, research the blaster launcher. This will give you the most powerful weapon in the game. I like to have three blaster launchers in a group.

"With armor, always go for the best. Put the best armor on your best characters.

"While you may never need to use a medi-kit, I strongly recommend that you have one medi-kit for each character. It is better to have it and not need it than to need it and not have it. The medi-kit will allow you to stop your characters from essentially bleeding to death. Without the medi-kit, every injury is potentially life-threatening. It is really frustrating to watch your character bleed to death from a one-point-per-turn wound."

—Andy Mazurek

GENERAL COMBAT TACTICS

"When you are done with your turn, cycle through the characters with the Next Character button once. You can easily see if you forgot to move somebody by doing this."

—Andy Mazurek

"The aliens love the dark, and they love it when you come after them in the dark. That way, they can sit back in the shadows and wait for you to stick your head out and—Zap!—you're the guest of honor at an alien dinner banquet.

"There are ways around this. By using the 30-minute time option, you can skip through time until the site of the ground assault is in daylight. If you can't wait and you've got to go in at night, take plenty of electro-flares. Trust me. They hate it when you use flares."

—Chris Bowling

"Designate a couple of people to be grenadiers, and carry only grenades and high-explosives. The best people to choose for this are the ones who aren't so good at shooting. Even soldiers with relatively low throwing accuracy can make fairly effective demolition experts. You don't have to hit an alien in the head with a grenade for it to kill him. You just have to be close.

"Also, prime your grenades early. Then you can carry them around and be ready to throw them when you see a target. Be careful not to drop one, though. As soon as you let go of the grenade, it goes off. This can be a problem if the soldier carrying the grenade panics and drops it. Still, having the grenade ready is usually worth the risk.

"Proximity grenades make great weapons. They are perfect for area denial, like in a base or in a UFO. You can block off a hallway behind you by priming one and leaving it behind. Just make sure you watch where your guys are moving and remember where you threw it, since your soldiers can set off the grenade too."

—Jim Hendry

"It is possible to 'pin' a target with proximity grenades. Throw a few at the target, and then maneuver around behind him. He can't turn without setting off the grenades.

"I also like to fly over a target and drop two proximity grenades at the alien's feet, and then fly away and wait for the explosion.

"I call this 'Sky Raider.' I take a character in a flying suit and give him a plasma pistol and ten proximity grenades. I put the pistol in the backpack, a primed grenade in each hand, and the rest of the grenades in the belt and pack. I then fly around looking for targets. When I find one, I fly over and drop two grenades. When I'm out of grenades, I still have the plasma pistol to protect my soldier.

"This tactic works well in outside encounters, especially terror sites.

"Oh! Remember where you threw your proximity grenades. It's real embarrassing to blow yourself up with your own grenade."

—Andy Mazurek

"When you go out on a bug hunt, don't run it like a cocktail party, with big clots of people standing around everywhere. Execute it in an orderly, Marine-type fashion. I try not to keep my men bunched together; that only makes them a target for a well-placed alien grenade or blaster bomb.

"I usually send my men out in standard, two-by-two formation" (see Figure 12-1). "In groups of two, the squad is broken up enough not to be a tempting target for high-explosives but still allows one soldier to cover the other. This also lets me cover the largest amount of territory as fast as possible, without hanging any one soldier out to dry.

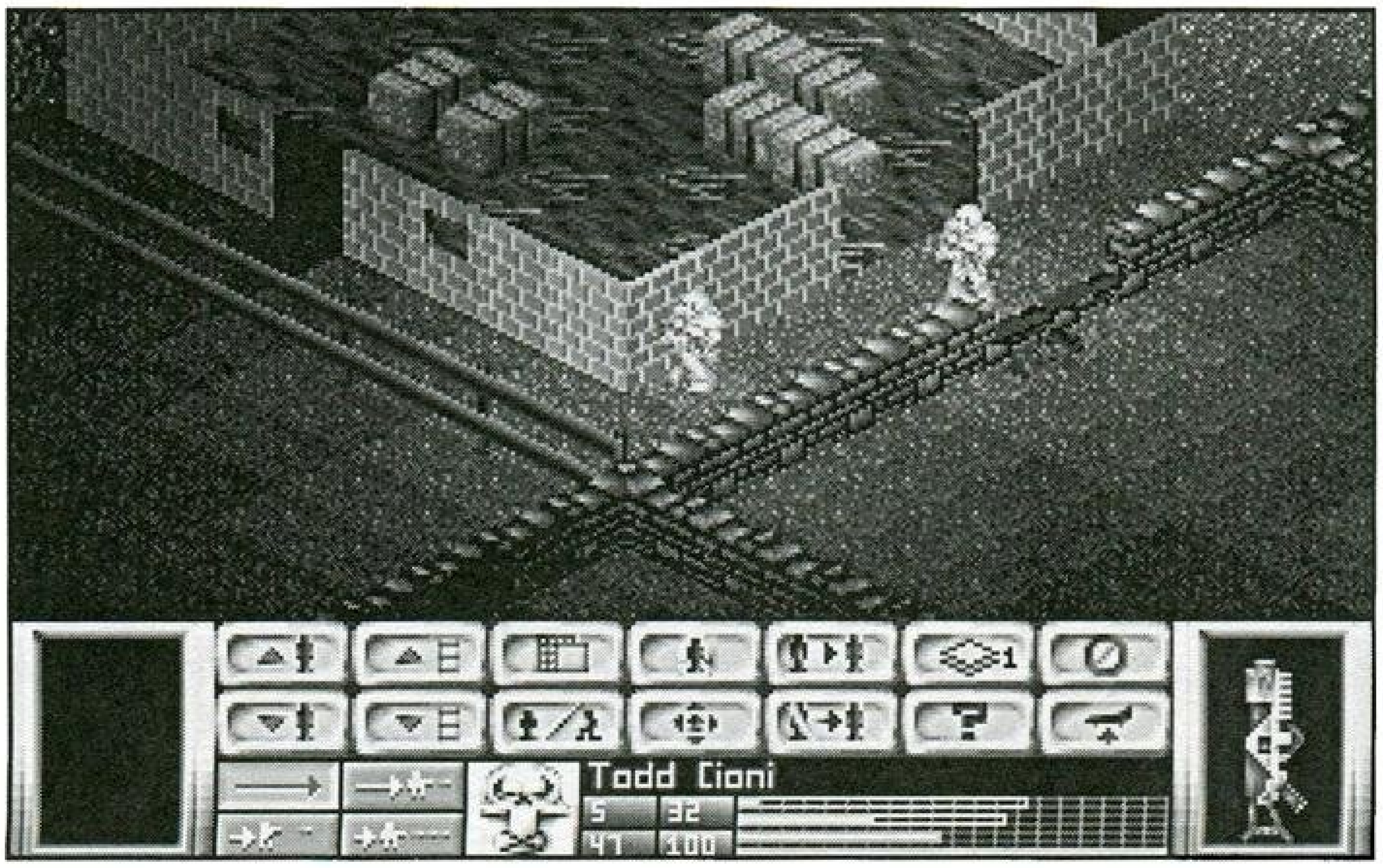


Figure 12-1
Deploying soldiers in a two-by-two formation.

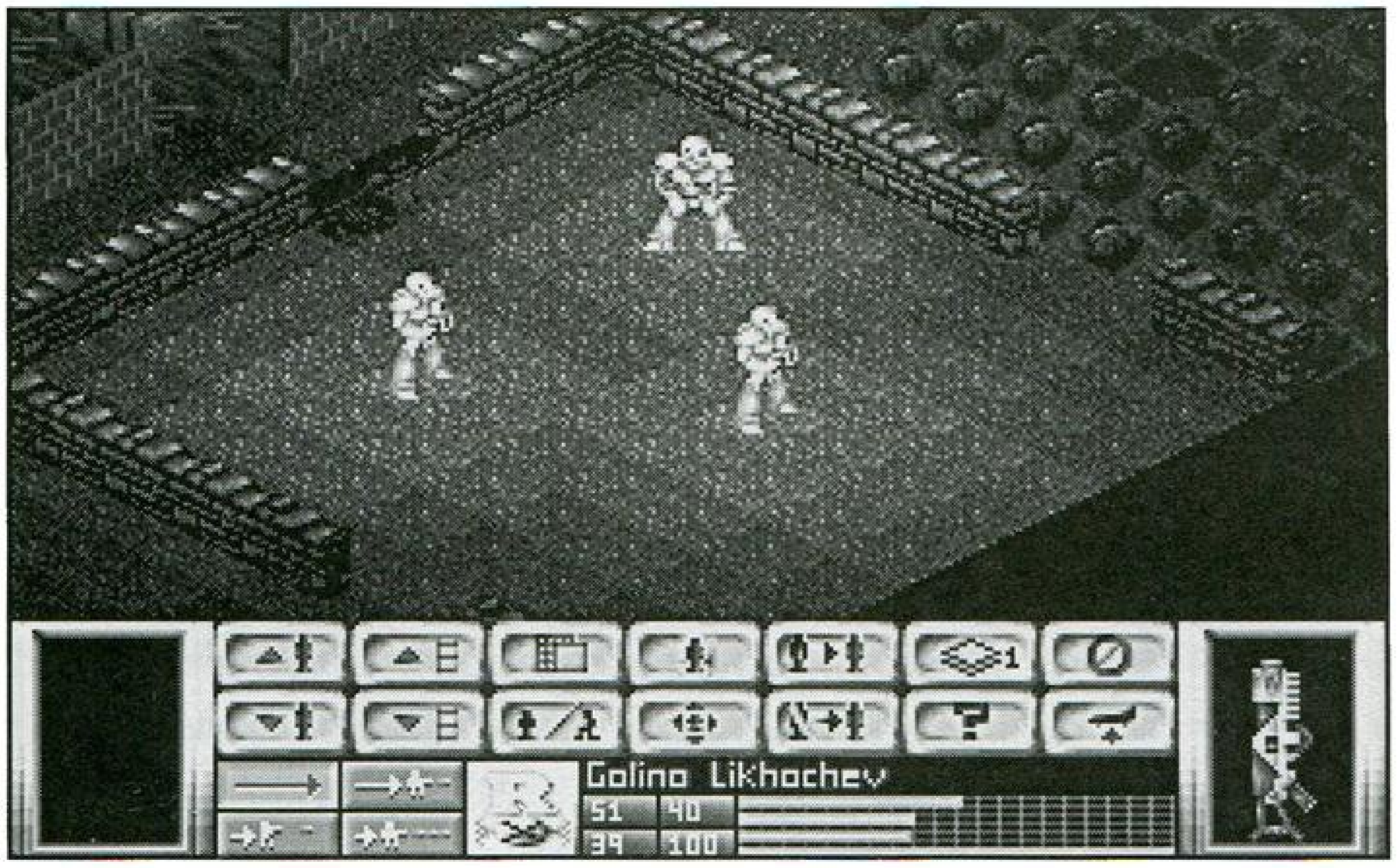


Figure 12-2
The three-man triangle formation.

"In situations where I need as much firepower as possible, I use the classic three-man triangle formation" (see Figure 12-2). "Keeping the soldiers spread out enough so as not to be a single target but close enough to give supporting fire to each other, I can still cover a large portion of the map in a minimum amount of time. Hey! It worked for the Zulus!"

—Chris Bowling

"Watch your line of fire. If you miss the intended target, look to see what you might hit. It could be another one of your characters or something that might explode, like a gas pump or UFO power source."

—Andy Mazurek

"Unfortunately, some soldiers usually get killed on a ground assault. Since your soldiers lose more morale points when an officer dies, use your rookies to walk point and draw fire if you don't have any HWPs to do it, or if the HWPs can't fit into the area you're in. If the rookies manage to survive, they'll be promoted and become more useful members of the team. If they die in the line of duty, it's a sad thing, but you can always recruit some more. And you haven't lost any officers to a lucky alien shot by sending them out on scouting patrol."

—Jim Hendry

"Remember to set the button to allow time at the end of the turn for at least a snap shot. You can always turn it off if you need to, but you cannot add time units to a timed-out character."

—Andy Mazurek

"When going out into an open area, be careful; getting caught in a cross fire can be very costly. Do what Custer should have done: Send in scouts. I usually use rookies for this job. They make perfect Sectoid fodder.

"If you can afford it, a nice, solid tank does a really good job of drawing enemy fire. Just think what would have happened if Custer would have sent in an M-1 tank and a couple of HumVees at the first Little Bighorn!"

—Chris Bowling

"If a soldier is hit by enemy gunfire, check that soldier's health. He may have a wound that will cause him to die in a few turns."

—Andy Mazurek

"Start a mission at the map corner and sweep across, thoroughly searching or destroying all buildings and making a thorough search of orchards, parks, and other natural hiding places. Remember to check the rooftops—Sectoids love rooftops."

—Jim Hendry

"When you're searching for aliens, do not forget to look up. Those Floaters can be really nasty when they are hovering right above you.

"And, speaking of flying, developing flying suits is very important when you start going against aliens that need to touch you to attack. If a Chryssalid cannot touch you, it's not half as scary."

—Chris Bowling

"Use motion detectors before you move your soldiers."

—Andy Mazurek

"Sometimes, ground assaults go bad and you have to cut your losses and run. To minimize your losses in a situation like this, always leave one person in your landing craft. That way, if all hell breaks loose, you can dust off and not leave the landing craft behind."

—Chris Bowling

"Remember to take it slow. You don't get extra points for getting through missions in 30 minutes or less. This isn't a pizza-delivery operation. Haste makes corpses!"

—Andy Mazurek

Save your games frequently (just plain good advice!).

CAPTURING ALIENS

"Capturing aliens is the hardest part of the game. What I like to do is arm everyone in the party with small launchers and stun bombs. (Remember to keep a laser rifle in your backpack just in case you need one.) I then go on a mission as before; only this time, instead of killing aliens, I stun them. Unfortunately, in these missions losses, can be high. The single-shot weapon is to blame in some cases, although carelessness on the player's part is usually the case.

"You should take your time and plan the attack; there is no time limit. Make sure the soldier has time to duck back under cover after a shot. Have another character nearby to provide additional firepower should the first shot fail. Know the limitations of your weapon. Remember: Some aliens just can't be stunned!

"This is also a great way to bring mind-controlled companions back to the base alive."

—Andy Mazurek

UFO RECOVERIES AND ASSAULTS

"It is usually much more rewarding to catch an alien craft that has landed than one that has been shot down. If you can wait the aliens out and catch them on the ground, there will usually be more booty for the taking—especially Elerium."

—Chris Bowling

"Just for fun, if you don't need the aliens or equipment inside, try this little trick. When you have shot down a Medium Scout and the power source explodes, it leaves a hole in the roof of the UFO. To clear

out the inside of the UFO nicely, fire a blaster bomb through the hole in the roof. The screams of the dying aliens will do your heart good!"

—Dave Ellis

"Using a blaster launcher to blow a hole in a spaceship and going through that hole will catch the aliens off-guard. They will usually be guarding the main exits and elevators. So when you come through a wall, they will usually not be in a position to fire at you."

—Chris Bowling

"When attacking a small ship, I try to surround the ship from as many sides as possible. Once I get the ship in sight, I try to get in a good position to fire; behind a stone wall or the second story or roof of a building work great. I try to put my best shooters in these areas.

"Once the ship is surrounded, I send in my close assault team. This consists of two stunners (two guys with stun rods or small launchers), and a laser rifle sharpshooter in case things go wrong. (It's the guys with the stun rods that usually die. This is a good job to give to a rookie. If the rookie dies, big deal! You can always get another one when you get back to the base.)

"When attacking a larger ship, I will try to get into the ship as soon as possible. I then split into two or three small groups. I try to keep the groups about two turns away from each other. That way, an alien with an area-effect weapon can't kill everyone with one shot.

"Once I reach the edge of the ship, I spread out into a line and sweep each level clean. I advance only as far as the slowest man will go with auto-shot time-saved for the end. When I come to a room, I halt the advance while one man checks it out, with another waiting at the door in case of emergencies. This allows for a slow, yet controlled, sweep. Remember: There are no bonuses for time saved.

"If I find an elevator, I station a man to watch it and move on. Once the level is clean and secure, I station a few men on overwatch (those left near the elevators will do) and send the rest up to the next level. Once that level is secure, I bring the elevator guards up to watch the next set of elevators.

"Once the bridge (control room) is found, I send for the assault team. This time, I send additional sharpshooters as added protection."

—Andy Mazurek

TERROR MISSIONS

"Bring lots of grenades, rocket launchers, blaster launchers, and HWPs. And more grenades. Then proceed to blow up everything in sight.

"Yeah, it's violent and destructive, and you probably should think about the lives of the civilians. But when it comes down to losing a few points for a dead civilian or losing an expensive soldier, the soldier comes first, in my opinion. If you blow up a building at a terror site, that's one less building some alien sniper will be shooting you from. Normally, don't try to kill civilians, but this is a free-fire zone.

"When it comes to terror missions, my priorities are (in this order):

- *Bring the ship home.*
- *Keep your people alive.*
- *Win the mission and capture stuff.*

The civilians are not your people."

—Jim Hendry

"Uh-oh. Look who's moved into the neighborhood. Keeping the neighborhoods clean of aliens (from space, not from Third World countries) is important. Not only does it keep the local property value up, but it helps you keep a good rating from the country being terrorized. This means more money! So be sure to wipe out terror sites as soon as possible."

—Chris Bowling

"Speed does count when you are up against Chryssalids. Kill everything. Destroy everything. In this specific case, the only good civilian is a dead civilian. Hunt them down, before the Chryssalids can turn them into an army of Zombies and you have twice as many aliens as you started with!"

—Jim Hendry

"Don't use mind control on the civilians. On the surface, this might seem like a good way to force them to stay out of your way. However, once a citizen has been mind-controlled, he or she is counted as an alien by the game. That means you are forced to kill the citizen before you can end the mission."

—Dave Ellis

ALIEN BASE ASSAULTS

"Attacking a base is the same as attacking a large ship, with two exceptions: There are more aliens, and the base layout is not always the same.

"When attacking a base, I try to take additional heavy area-effect weapons. Remember: When in doubt, blow it out!

"When the command center of the base is found, I bring up the assault team again. A decision must now be made: Are you going to capture or kill? Both are easy if the right tools are handy. If you want to kill and you have a blaster launcher, launch a bomb up the elevator shaft and into the room above. That should do it. If you do not have a blaster launcher, you'll have to storm the elevators. This usually results in high casualties. The aliens in the control room are leaders and commanders, and they can cut you down like grass in a mower.

"One of my tactics is to have a soldier carry a primed grenade in each hand, one set for two turns and one set for three turns, and send him up. Even if the soldier is killed, the grenades will still go off when dropped. If the soldier survives the initial attack, he can throw the grenades at the aliens and then go back down the elevator. Do not use proximity grenades to do this! If you die before you throw them, they will drop to the floor armed and explode only if an alien moves. If the aliens don't move, you still have to come up and get them, and now you've left a booby trap to go off in the face of your own soldiers!

"If you are going to stun them and you have a small launcher with stun bombs, fire a few up the shaft. Then reload and move in. Hopefully, you have stunned one or two and can survive any return fire. If you are trying to capture alien leaders by using stun rods, forget it—you're on your own!"

—Andy Mazurek

"Keep in mind the general layout of the first alien base you visit. For the most part, bases are laid out in a very similar manner. The one thing that is the same in every single alien base is the command center, where the head alien (I guess a Sectoid leader would be called the 'Grand Pupa'?) hides out. The layout of the command center is very distinctive."

—Chris Bowling

"If you have swept the whole base and are looking for that last alien, usually an elevator in the base goes up to a room that has four doors, one in each wall. I have found that there is usually an alien hiding in one of these rooms."

—Andy Mazurek

THE FINAL ASSAULT

"When you are ready to go after the Mars base, you should load for bear. Take every heavy area-effect weapon you can find. Also, take two hovertank/plasmas. Put everyone in the best armor possible.

"Run, run, run, run, run for the elevator! What I do is send one hapless rookie in a flying suit high in the sky to draw enemy fire. (This may sound cruel, but—hey—it works!) I then run the other characters to the elevator at best speed. Do not save any time for end-turn shots. The next turn, I send another rookie up and repeat the procedure until I am at the elevator. I use the tanks to fire at enemy locations. You can usually get to the elevator in three rookies.

"Once inside the base, look for the command area. It is in this area that you will find the 'Brain.' Destroy the Brain and you win. I just send a blaster bomb up the elevator shaft and into the Brain room. When the Brain guards are dead, go up and kill the Brain. The Brain doesn't fire back. A blaster bomb will kill it quite nicely. If other weapons are used, you will find that there are four sections to the brain. All must be destroyed to win."

—Andy Mazurek

APPENDIX A

Designers Note

The origins of the tactical combat system in X-COM go back to 1983 with a two-player game for the Sinclair Spectrum called Rebelstar Raiders. When I designed that game, I wanted to create a quick-playing, individual-level combat simulation. The game proved to be popular, and the idea was developed through successive games such as Rebelstar (1986) and Laser Squad (1988).

When I first approached MicroProse with an idea for a sequel to Laser Squad, I was surprised how well known the game was throughout the company. MicroProse wanted a "big" game, however, so it was decided to add a general strategic background to the game based on the theme of protecting Earth from UFOs. I thought that this was an excellent theme that has been largely unexplored in the realm of computer games.

I began to do some research into UFOs and discovered the various stories about alien-government pacts and alien abductions. Many elements of this UFO mythology went into the game, and the concept of X-COM as a secretly funded organization is based on the alleged existence of MJ12, a government-sponsored group of leading scientists and military personnel. X-COM, however, is a truly international force funded by many countries.

After the concept was clear, we had to create a playable game. I knew that the basic tactical combat system I had developed in many earlier games would work reasonably well. The difficult part was to create a semi-random scenario generator that could generate many scenarios. I was not sure how many combat sequences there would be during the course of the game, so we made an effort to ensure that the system resulted in unique combat situations each time.

The second most difficult task was to make sure that the artificial intelligence (AI) functioned well. The major fault of any AI system is that after the enemy behavior becomes predictable, it is possible to beat it every time. We tried to build a fair degree of randomness into the aliens' behavior and at the same time make sure that they did not do anything stupid. I think we succeeded reasonably well, given the limitations of the computer (sophisticated AI can swallow huge amounts of processor power). Inevitably, there is the suspicion that the computer "cheats" (that the aliens know where all your troops are). Actually, the AI is limited to the same rules as the human player—with the exception that when an alien spots one of your soldiers, it remains spotted for a few turns, depending on the alien's intelligence rating.

Toward the end of the project, we were slightly worried about how the game would play. This is partly because we had developed the tactical system first and then tagged on the strategic elements at the end. There were many disparate elements in the game, and I was concerned about how it was all going to fit together. In the end, we did not have to make any major changes to the original design. Although no single element of the game is particularly original, as a whole it seemed to create an interesting blend of strategy, tactics, and resource management. A strategy game should allow a player to explore different strategies and create solutions to problems without there being one single correct method to win the game. I know that X-COM is like this because I really do not know what the best strategies are myself, despite being the designer.

Inevitably, there were features that we wanted to include but could not because of time and resources. In particular, I wanted to add a scenario designer-generator for players to create their own games. I also wanted to include multi-player options because I still think that playing against a real human opponent is far more satisfying than beating a computer.

Despite these omissions, there is always the next game to consider—be certain that you have not heard the last of X-COM.

Julian Gollop, Mythos Games, 1994

Credits

X-COM UFO Defense (published in the U.K. as UFO Enemy Unknown)

Game Design and Programming
Mythos Games Limited
Julian Gollop
Nick Gollop

Graphics and Animation
Julian Gollop
John Reitze
Martin Smillie
Music
John Broomhall

Sound Effects
Andrew Parton

Quality Assurance (U.K.)
Peter Woods
Andrew Luckett
Richard Bakewell
Darren Kirby
Phil McDonnell
Jason Sampson

Quality Assurance (U.S.)
Vaughn Thomas
David Ginsburg
Jim Hendry
Bob Abe
Bill Burton

Manual Author
Kristian Ramsay-Jones

Managing Editor
Alkis Alkiviades

Packaging and Manual Design
Sarah Warburton
John Emory
Joe Morel
Cesar Novoa

Producer
Tim Roberts

Publishers
Paul Hibbard
Peter Moreland

APPENDIX B

Glossary

Abductor. A UFO used by aliens for the purpose of capturing humans and Earth animals for genetic experiments.

alien. A generic term used to describe all species of extraterrestrial life in the game.

Alien Base Assault. A Ground Assault that involves sending a squad of X-COM soldiers to infiltrate and destroy an alien base on Earth.

area effect weapon. High-explosive or incendiary weapons that inflict damage over an extended area. Weapons in this class include all grenades, Rocket Launchers, Heavy Cannons, Auto-Cannons, Blaster Launchers, and Small Launchers. Area effect weapons are also utilized in some HWP designs.

Avenger. An advanced X-COM craft based on alien UFO technology. The Avenger, a combination transport and interceptor, is the most advanced craft available to X-COM forces.

Base Defense. A Ground Assault in which X-COM soldiers are forced to defend their own base from invading aliens.

base defenses. Shielding and weapons installed at an X-COM base to protect it against attack by alien forces.

Battleship. A large and dangerous alien craft; this UFO is used primarily in retaliation attacks against X-COM forces.

Brain. The designation, for lack of a better one, for the controlling cybernetic being who is organizing the alien threat to Earth. The Brain must be destroyed to win the game.

conventional. Weapons based on existing Terran technology. Weapons in this weapons class include the Pistol, Rifle, Rocket Launcher, Heavy Cannon, Auto-Cannon, Grenade, Smoke Grenade, Proximity Grenade, and High Explosive.

craft. An X-COM flying vehicle used for the transport of soldiers or the interception of UFOs. X-COM craft include the Skyranger, Interceptor, Lightning, Firestorm, and Avenger.

craft weapon. Weapons designed to be mounted on X-COM intercept craft.

Cydonia. The name of the once flourishing Martian city that is now the location of the aliens' primary base of operations.

detection system. A base structure used to detect UFO activity. The three detection systems in the game are the Small and Large Radar Systems and the Hyper-Wave Decoder.

Final Assault. A two-part Ground Assault that takes place first on the surface of Mars and then in the main command base of the aliens. This is the final mission of the game.

Firestorm. An advanced X-COM interceptor based on classic UFO designs; much faster and more powerful than the older Interceptor.

grenade. Thrown explosive weapons. Weapons in this class include the Grenade, Smoke Grenade, Proximity Grenade, High Explosive, and Alien Grenade.

Ground Assault. Any mission performed by X-COM soldiers. There are five types of Ground Assaults: UFO Recoveries, UFO Assaults, Alien Base Assaults, Terror Missions, and Base Defense.

Harvester. A UFO used for the purpose of collecting human and other Earth specimens for use as alien food.

HWP (Heavy Weapons Platform). A medium-size, automated vehicle mounted on a powerful weapon too large to be handled by soldiers. There are two basic HWP types — the tank and the hovertank —that are mounted with a variety of weapons ranging from cannons to fusion bomb launchers.

interceptor. A generic term used to describe craft that are designed to intercept and destroy UFOs. Also referred to as a "fighter."

Interceptor. An atmospheric fighter aircraft that represents the best that Earth technology has to offer in an interceptor craft. The only interceptor available at the beginning of the game.

laser weapons. Weapons based on advanced Terran technology, which utilize a coherent beam of light to inflict damage on a target. Weapons in this class include the Laser Pistol, Laser Rifle, Heavy Laser, and Laser Cannon. There are also HWPs and base defenses based on laser weapons technology.

Lightning. An advanced X-COM craft that combines the abilities of an interceptor and a transport. Although more advanced than the Skyranger and Interceptor, it is a primitive imitation of alien UFO designs.

plasma weapons. Weapons based on alien plasma technology, which uses an accelerator field to propel particle energy at a target. Weapons in this class include the Plasma Pistol, Plasma Rifle, Heavy Plasma, and Plasma Cannon. There are also HWPs and base defenses based on plasma weapons technology.

Scout, Large. The largest of the small Scout-class UFOs, this ship is used for a variety of different alien missions.

Scout, Medium. This small UFO of the Scout class is used for reconnaissance before the arrival of larger UFOs.

Scout, Small. A tiny UFO that carries only one occupant and has no weaponry. Used for reconnaissance before the arrival of a larger UFO.

Skyranger. A light transport craft used to convey X-COM troops, HWPs, and equipment to and from Ground Assaults. Although it's an efficient transport, the Skyranger has no weapons capabilities.

Supply Ship. A large UFO used to carry materials for the construction of an alien base on Earth. These vessels are also used to keep the bases supplied after they are built.

Terran. Of or belonging to Earth. For example, "Terran citizens" are people who live on Earth.

Terror Mission. A Ground Assault in which X-COM's duty is to protect the citizens of an Earth city from the alien terrorists that have landed there.

Terror Site. A city in which the citizens are being terrorized and killed by the alien occupants of a Terror Ship.

Terror Ship. A large UFO used to land alien terrorists personnel near Earth cities for the purpose of terrorizing and killing the citizens.

TU (Time Unit). A unit of measurement used to determine the number of actions each X-COM and alien unit can take in a turn. Each unit has a limited number of Time Units each turn, and every action uses up a set number of Time Units.

unit. A generic term to describe X-COM soldiers and HWPs, as well as aliens, in a battle situation.

X-COM. EXtraterrestrial COMbat unit. A multinational, secret organization established through the joint cooperation of the governments of the world to combat the alien threat.

UFO (Unidentified Flying Object). A generic term used to describe a variety of alien spacecraft types.

UFO Assault. A Ground Assault in which X-COM soldiers attack a UFO that has landed intact somewhere on Earth.

UFO Recovery. A Ground Assault in which X-COM soldiers secure the site of a UFO crash and collect the artifacts and equipment left behind by the aliens.

UFOpedia. The collection of the results of all research projects, both Terran and alien, which your scientists complete through the course of the game. These records are available at any time during the game.

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